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THE SPHERE, DECEMBER 9, 1939
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THE SPHERE

Vol. CLIX No. 2081 WITH WHICH IS INCORPORATED THE GRAPHIC DECEMBER 9 1939

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PRESENTS FOR PRACTICALLY EVERYONE

Your Christmas parcels are probably bound for many destinations. But whether they are for men who are serving overseas or for those at home, we are brimming with comfortable, cheerful and useful ideas to put in them. If you will call in, we shall be most happy to help you in making your choice. If you are unable to call, we will send you our Christmas book, containing well over a hundred suggestions. A few of these are listed below.

When you have chosen, we will, if you wish, send your presents direct. And it will be our privilege to pay for both postage and insurance on parcels for members of His Majesty's Forces, either abroad or in Great Britain.

IDEAS UP TO 10/6

Khaki wool socks - - 2/6, 3/6, 4/6
Tenova self-supporting socks in black and navy, or in attractive patterns - - 3/6, 4/6, 5/6
for the country, 5/6; for the evening 5/6
Balaclava helmets - - - - 3/6 to 7/6
Service cape gloves - - - - 6/6
Ties cut from English silk squares - 6/6, 8/6
Folding slippers in case - - - - 7/6
Hogskin gloves - - - - 8/6, 10/6
Khaki lustre shirts with two collars - - 10/6
'Luvisca' shirts with two collars - - 10/6
Khaki slipovers - - - - - 10/6
Self-coloured or marl mixture slipovers 8/–, 9/–, 11/6

IDEAS FROM 10/6 TO £1

Umbrellas - - - - - 12/–, 15/6
Sac wrist Hogskin gloves - - - 12/6
Leather pyjama cases - - - - 13/6
Lustre pyjamas - - - - - 15/6
Wool scarves in khaki, navy, and Air Force blue - - - - - - 15/6
Dress studs, links and buttons in case - 16/6
Collar-attached shirts in all-wool Riviera - 18/–
Weatherproof gabardine golfjacs - - 18/6
Scotch knit wool cardigans - - - 19/6

IDEAS FROM £1 TO £2

Fitted leather dressing cases - - - 25/–
Sea Island Cotton pyjamas - - 25/6, 27/6
Tan cape motoring gauntlets, fur-lined - 26/6
Pure Indian Cashmere slipovers - - 32/6
Tan suede leather jerkins - - - 38/6

IDEAS FROM £2 TO £5

Corby trouser press - - - - 45/–
Canvas travel grip - - - - 50/–
Striped silk pyjamas - - - - 50/–
Pure Indian Cashmere cardigans - - 55/–
Wool dressing gowns - - 60/–, 70/–, 80/–
Harris tweed sports coats - - - 67/6

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THE SPHERE
With which is incorporated "THE GRAPHIC"
The Empire's Illustrated Weekly
London, December 9, 1939

THE EYES OF THE R.A.F.

How the Pictures of Germany's Defences are Secured

In the absence of concentrated aerial combat, the R.A.F. have been active over the Western Front and above Germany itself taking pictures of vital objectives. Despite the much-vaunted supremacy of German lenses and cameras, the British apparatus is now admitted by experts to be far superior to that of the enemy. The importance of this necessary and hazardous spade-work will become more and more apparent as the war progresses. Aerial reconnaissance and photography has consequently become one of the most important duties of the R.A.F.; and at the Air Force School of Photography boy apprentices from 16-18 years of age are given an intensive course to fit them for this arduous work. The course includes the taking of pictures, developing and printing, and the plotting of mosaics—joining up the resulting pictures to make a complete plan of the area photographed. This picture, taken a few days ago, shows one of the boy-observers of the R.A.F. receiving final hints from an instructor before going up. The details of the camera gun will interest many of our technically-minded readers

Postage—Inland, 1½d.; Canada and Newfoundland, 1½d.; Elsewhere Abroad, 2½d.

THE DUKE AND DUCHESS VISIT THEIR EVACUATED CHILDREN

Like other British children previously living in danger areas, the children of the Duke and Duchess of Kent have been evacuated to the country and are at present living in the west of England. When the Duke, who is now serving with the Navy, obtained short leave recently, he and the Duchess went to see their children in their new home; and here the two are seen with their daughter, Princess Alexandra

32–34, ST. BRIDE STREET, E.C.4
Wednesday, December 6, 1939

RUSSIA AND FINLAND.—

The two great modern "ideologies" in whose ideals lay "the future and the peace of Europe" saw to it, by means of the most highly and effectively organised propaganda machines ever built, that the heathen world outside should learn *ad nauseum* what those ideals were. *Imprimis*—peace. Peace . . . on terms? On *their* terms, yes. Well, we know all about Nazism and Communism to-day. Principles and ideals go by the board if a chance come to outrage a child in the lane and to go unpunished, or to slit a weak woman's throat for her purse with no fear of the consequences. Peace with the strong. War on the weak. And still, in this battle between the forces of good and evil, *still* there are neutrals. And one by one the weaker will doubtless be exterminated, while they stand by and watch and wait and wobble.

RUSSIA AND GERMANY.—

Germany was in full agreement with the Russian demands on Finland, and "very sympathetic" towards her assault on Finland. It is not surprising. Even for the Nazis it would be a trifle too illogical so swiftly to repudiate in her "ally" the methods of aggression and the sickening technique which she taught her so recently. It would be more than illogical; it might be awkward. And meanwhile she is pouring concrete and iron spikes into her Russo-German Polish boundaries, and her allies are working just as hard. One keeps one's gun handy when one plays poker in the thieves' kitchen. There must be many hundreds of thousands of first-line German troops kept busy in the new boundaries of the German Reich in Poland and Czechoslovakia and Austria, spreading German culture. Typhus and other terrible and infectious diseases are spreading, too, from Poland. It may be politic to stop all leave for German troops engaged in Poland; and Russia, too, may find a carbolic sheet more effective than barbed wire.

PEACE AIMS?—

The Premier, in a manly, moving speech after twelve weeks of war, summarised results and achievements and setbacks to date very much on the above lines, but with, of course, the care in the choice of words and the safeguards and moderation which is essential for a minister. Right up to the end he held his listeners. It was only when he allowed himself, rather reluctantly, to sketch out the ideal of peace aims that he ceased to hold or carry with him one who listened. He admitted the desirability of silence on peace aims, and silence is surely best, until the war is won. Peace aims and actions now, as ever, depend upon the spirit of the victors and of the neutrals *on the day of the armistice*. In November, 1918, Germany had made that spirit intensely bitter by a score of barbarisms and bestialities. Into a hundred days of war in 1939 she has crowded four years of bestialities and if she continues as now she will have produced in the Allies and the bulk of the neutrals a spirit far more bitter than that which produced the treaty of Versailles or even made possible in England the intemperance of the coupon election of December, 1918. Our peace aims will be largely settled by Germans themselves by their methods of conducting the war. Nothing they can do will bring them victory. A return to decency and enfranchisement of soul might bring them a lasting and honourable peace. Such were my own reflections on that part of the Premier's great speech. Yet my reaction to talk of peace aims was very individual. Above all in his speech it was *that* which pleased America and when he restated those broad aims in Parliament, he clearly pleased a large proportion of his hearers in the House and in the neutral world. Nay, Labour considered that he was far too reticent. None seemed to question his certainty that this time Britain would play a leading part in re-making the world after victory, or to doubt that we must hammer on with assurances that we seek no vindictive peace. But *I* cannot forget that some of the most vindictive clauses of the Versailles Treaty were due to the justifiable anxieties and bitterness of two nations which had been scarred and bled white by German brutalities. Who is so foolish as to talk of peace aims until he knows that such barbarities will not be repeated and can forecast the spirit which will exist when war ends? What else makes history but the spirit of the hour?

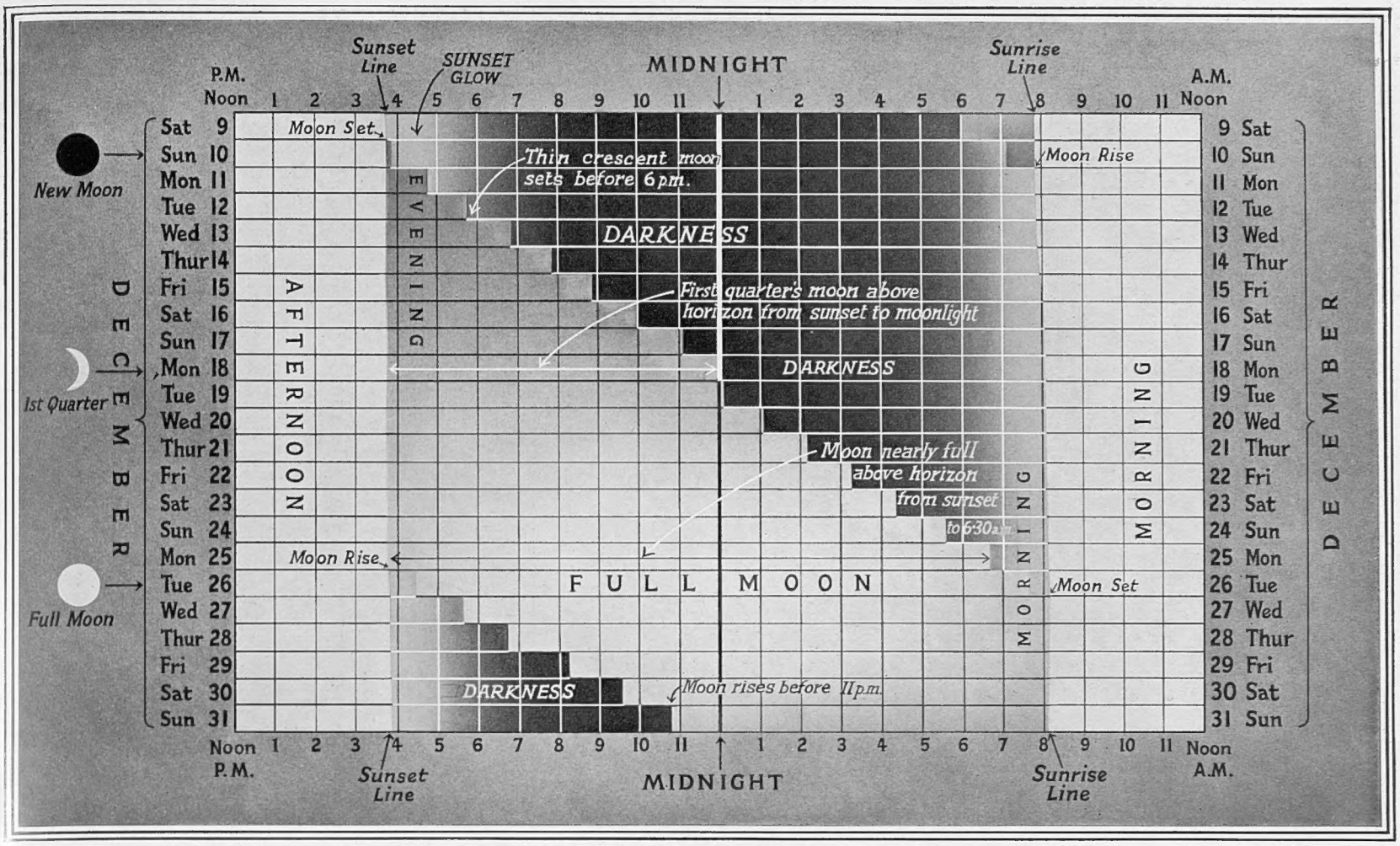
THE HUNDRED DAYS.—

Next Sunday, December 10, is, I believe, the 100th day of the war. It should afford the Sunday papers a great opportunity for a review of business done which I doubt not they will usefully exploit. A hundred days! What a life-time they can be! What a flash in the thunderstorm of existence. The last 100 days of his power must have seemed in June, 1815, long to Napoleon, if one judges the incidents and hopes and activities which he crammed into them. Perhaps they seemed but a moment of time when he looked back on his triumphs and marches, his heights and depths, from Italy to Waterloo. It will take more than 100 days to rid Europe once more for two generations of the constant menace of aggression. But, sure as Fate, sure as there is a purpose in human existence, for Hitler also there waits a Longwood and a period of reflection on a great truth—that no one man can dominate the world. What is the chief thing that strikes me about these 100 days just accomplished? I think the first and most important is that in our initial dread of the unknown and our later realisation of the known dangers which beset us, not one man, woman, or child in the empire has ever felt the smallest doubt about the ultimate issue. We are perfectly certain that our cause, the cause of humanity and freedom, will triumph, and that Germany will be brought to her knees and brought to realise the bitter tragedy to herself and Europe of the Nazi regime—and much has been done to assure that victory. We have in 100 days of ceaseless work so organised man power and war material that we are superior to the enemy in every branch and in every factor which makes for victory in war. We are united as a nation and united with France. We have pooled our resources and share the burden equally, internationally, and individually. On land our armies are untouched and will be employed when we think fit and we have completed an impregnable wall of defence from Switzerland to the Channel. We have good reason to know that we are greatly superior to the enemy in the air and reason to believe that long-distance bombing has already proved an antiquated theory of knock-out warfare. We have coped with and checked the U-boat menace and called out before the war has well started the enemy's desperate expedient and secret and vaunted weapon, the magnetic mine, and already we may hope that it has spent its greatest price, the factor of surprise. There is no cypher which man can devise which man cannot unravel, and there is nothing which Germans can invent which we cannot counter and improve on. It is war to the death and we mean to fight it relentlessly. We have got our war legs. There is now no war of nerves. We have got down to brass tacks and taken the measure of Nazi threats of frightfulness. Their words may make our stomachs turn but cannot make our flesh creep.

A WAR NEWSLETTER —No. XIV

ERRORS AND ACHIEVEMENTS.—And it is costing us many millions a day. If I personally believe we could have accomplished these tremendous gains with more dignity and no less efficiency without responding so quickly to the Nazi methods of paper war, it is a personal opinion only. Propaganda is inevitable in such a war as this, fought in a ring held by neutrals in terror of their own existence; but, while the correction of enemy lies is a duty of ministers, there is no need for them to reply in kind to Nazi slime-slinging. That business may properly be left to private members and to journalists. I think also that some of the money we have spent on that form of propaganda has been money wasted. I believe that the Government should conduct the war with greater faith in the intelligence of the neutral world and in the ultimate triumph of truth and decency. In these 100 days we have been proved wrong in a score of theories. Since men are men and even ministers are not supermen, there is nothing odd or deplorable in that. Whatever may come I shall continue to believe that we carried "safety first" principles too far in our air-raid precautions in rural areas, and wasted a vast amount of money and time and reserves of human energy in guarding against outside chances no more grave than peace-time risks on the road. We are still wasting a vast amount of money on unnecessary frills, on redundant departments carrying on activities which could only be justified experimentally in peace-time. Still we are wasting our resources on reduplicated services and efforts. Still there is a world of simplification to be done in our efforts to ration and to regularise, to control trade, and to canalise individual effort. But we have learned a lot; we are a democracy that works, slowly perhaps but efficiently, and we have a Government that is prepared to admit error and to listen to the voice of common sense when it swells to a national demand. In 100 days of war we have acquired the experience and surpassed the output of three years of the last war. We have not wasted those 100 days. Every one of them has brought us achievements and golden experience. Can Germany say as much?

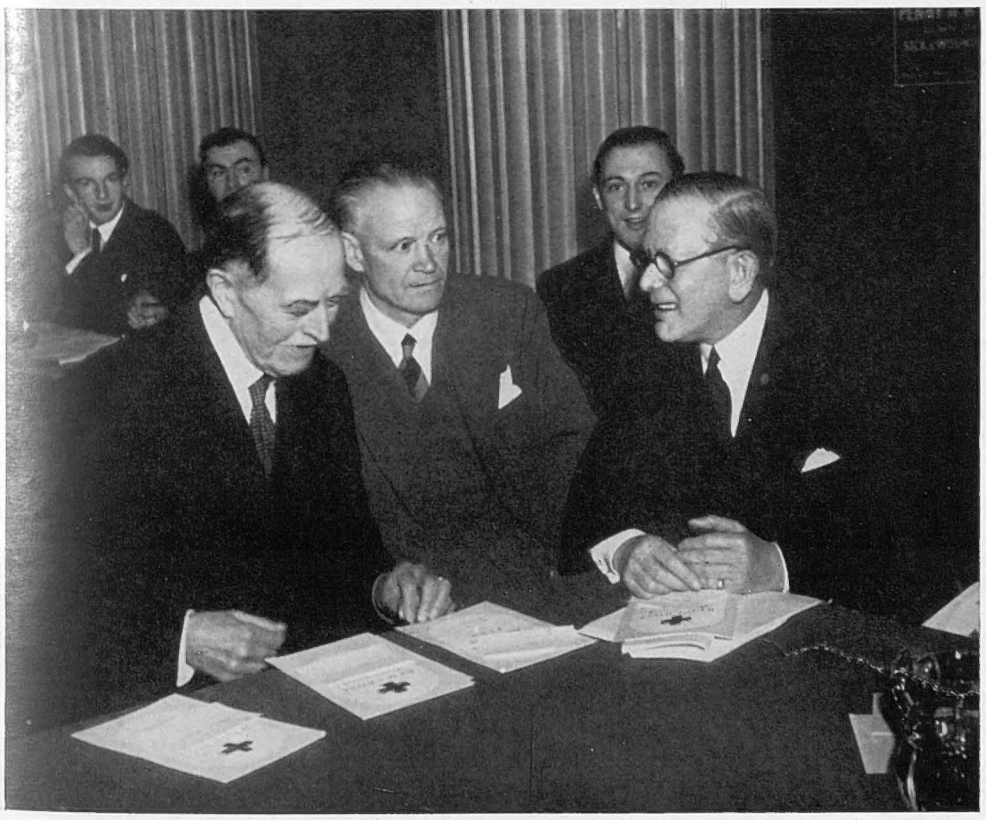
THE BRITISH EMPIRE DIES NEXT MAY.—That "great double-barrel," the *D.T. and M.P.*, clearly employed Mr. Oswald Villard, the American journalist, to make our flesh creep. Mr. Villard recently spent four weeks in Germany. He came back knowing the whole truth (and most of it bad). It is a doleful picture which he paints of the fate of the British Empire next May. The Nazis will mark time till early summer. Then 400 new U-boats will be launched on our shipping. At the same moment, 30,000 aeroplanes will begin mass attacks on Britain. They will not destroy London because that would bring in America (I did not know that any *Lusitania* would now induce America to come in). These aeroplanes will first of all destroy all our "fortified" sea-coast towns, and then work inland, avoiding London. At the same time France will be invaded from Spain and Italy. He does not directly say *by* Spain and Italy. And on all fronts the war to be waged on the Allies will make the Polish campaign look like a "Sunday school outing." By the end of summer the British Empire will be na-poo, and Hitler will be in tears because life without a British Empire will in his private opinion be a disaster for Europe and Germany. He adores and admires the British Empire and will go to work holding a pocket handkerchief before his streaming eyes. It is a doleful picture; but before we fly from the fortified city of Bournemouth or Bognor and crowd into the safety zone of London, let us perpend and draw what comfort we may from reflections:—(1) A month inside Germany in



"THE SPHERE'S" MOONLIGHT CHART UP TO THE END OF THE YEAR

As our previous Moonlight Charts have proved so popular with readers, we here present a third in the series, which thus brings the Chart up to the end of the year. In the New Year, we hope to present a Chart for each month, so that readers can plan their comings and their goings with due regard to the measure of blackness prevailing on any given night. The idea of this Chart is quite simple: according to the lightness or otherwise of the diagram, so there will be lightness or otherwise in the sky on that date. That does not mean, of course, that the brightness will be of daylight intensity, but on a moonlight night there will, obviously, be less of the oppression experienced when the moon is *not* above the horizon. By tracing along the line on any given date, the time of moonrise and its duration will easily be discovered

war-time is not a very favourable length of visit for learning the truth and nothing but the truth. A year or a *day* would be much more effective. Four weeks give a man time to hear too many rumours and discover not much truth. Mr. Villard's canvas is almost ludicrously overcrowded. (2) The Allies are—it is presumed—outworn, flabby and lazy. But, faced with extinction in May, we may be galvanised into doing something (if we have merely folded our hands so far!). We might build a few fighters ourselves. We might mop up another submarine. We might have another 100,000 trained soldiers in France. We might slightly reduce the German supplies of raw materials. We might before May prove to be that naughty animal *qui se défend quand on l'attaque*. We might even visit one of those thousand aerodromes round her great cities and drop a pamphlet on it. (3) We may look into Mr. Villard's figures and estimate the extent of his exaggeration, e.g., we know roughly how many men are employed on the ground for every airman who takes to the air. A multiplication sum will give us the figure of men required for Germany's summer air armada. It is a large figure of trained mechanics. And another elaborately trained horde of experts will be needed for the U-boat armada. I am not inclined on the whole to pin my faith on Mr. Villard's ugly picture, although it is painted for our guidance and learning. I do not write off the British Empire. Mr. Villard has still something to learn of the art of journalism. To succeed as a journalistic prophet you must divide your sensational prophecies by six and never overcrowd your canvas; you must avoid splashes of crude colour and never, never rely on getting the whole truth out of Germany or Russia or Spain or Italy or even France and Britain during a conducted tour of four weeks. We, too, may have a shot in our locker.



AT THE INAUGURAL MEETING OF THE PENNY-A-WEEK RED CROSS FUND

This meeting was held at the Mansion House on Wednesday of last week. The aim of the Penny-a-Week Fund is to obtain from every wage-earner in the country a voluntary weekly contribution of one penny, to be deducted from the pay-roll and paid into the fund's account through any bank. Prominent at the meeting were the well-known people seen above—Lord Crewe, Mr. Hugh Macrae, and Lord Southwood (chairman of the fund)

"TRIAL OF MARY COURT."

—In an undistinguished academic career, I only once achieved a first class—in my Bar examination on Criminal Law, evidence and procedure. And I am now a Mr. Muddlecombe, J.P. These facts, you will say, do not entitle me to criticise evidence in a murder trial. Nevertheless, "though all my law is fudge" I will venture to be a judge of Mr. Wild's *Trial of Mary Court*. He has done it admirably. He has reproduced the Old Bailey atmosphere and by clever selection given us the gist and essence of a sensational murder trial. I don't think crabbed old lawyers will quarrel much with his *procedure* but Mr. Muddlecombe ventures to quarrel with the Attorney-General, the judge and the jury whose verdict (I fear) was unfavourable to Mrs. Court. I could not myself find one shred of evidence strong enough to convict her, and I think that Mr. Attorney with the judge's approval should have thrown in his brief early in the trial. The letter to her lover, on which so much depended, seemed to me the best possible proof of her innocence of murder, and not of her guilt. Read it, ye lawyers-in-arms; it will wile away four hours of leisure and keep your hand in for peace.

ESCAPE LITERATURE—THE LADIES.

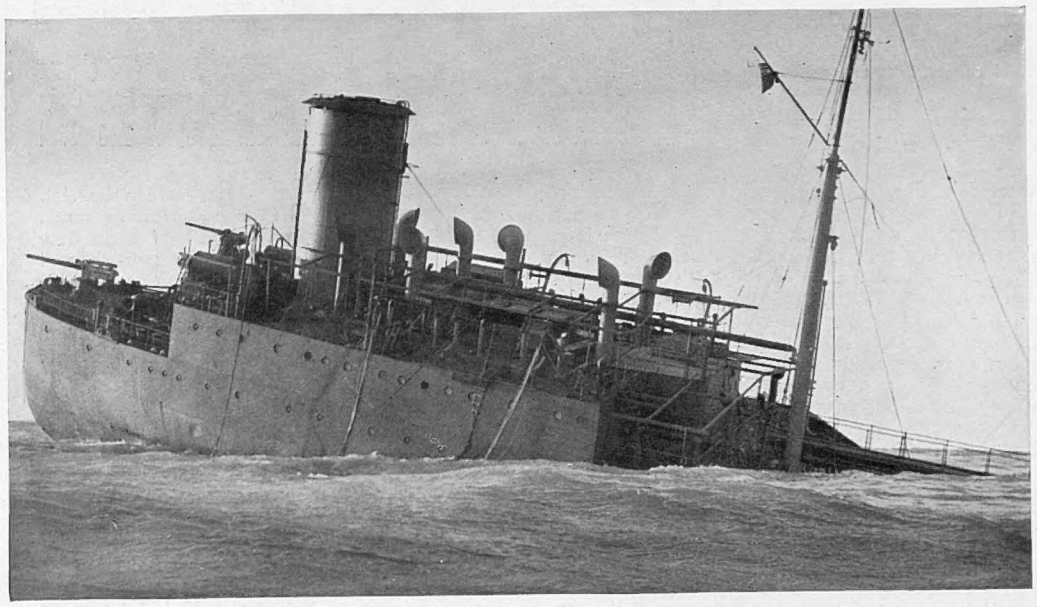
—Certainly Miss Yonge comes high in any list of "escape" literature in the present war. I am disposed to give the ladies a turn and to offer readers a selection of "escapist" novels by women which will take them away from the war and repay a re-reading. But first I ask myself: why is it that, whereas high-class novels by women who wrote in the Victorian or pre-Victorian era retain their vitality, those of the Edwardian and later eras do not do so to the same extent? Scores of Edwardian best-sellers are totally unreadable to-day—one single example would be Mary Cholmondeley. Even Mrs. Humphrey Ward is to-day a hard nut to crack. And of our present-time best-selling lady novelists, they have their tremendous splash and then their novels disappear altogether. Not so the Victorians and pre-Victorians. Enough has been said of Miss Yonge. Nothing kills Mrs. Henry Wood. She made nonsense of legal procedure and aristocratic usage, she was the very essence of the old Lyceum melodrama, but for her sheer story-telling power and tense atmosphere she remains vitally alive. Read *East Lynne* again. And let me remind you again of a still older and drawing room novelist, Emily Eden, and let me recommend you to re-read her *Semi-attached Couple* and *Semi-detached House*. Both are treasures of escapism. I name no giants (like Jane Austen) but I will include Miss Somerville and Martin Ross. They *were* Victorians. I think their *Real Charlotte* was published in 1895. The *Silver Fox* was Victorian also, as were the *Experiences of an Irish R.M.* The first-named is a grand novel. And—to hark back again—there is Mrs. Gaskell. Try *Cranford* again and certainly *Sylvia's Lovers* and your escape will be assured. There are eight novels for you, say sixty hours of escape in the company of charming ladies and their creations.

THE OLD STAGER

THE WAR BY SEA. . . .

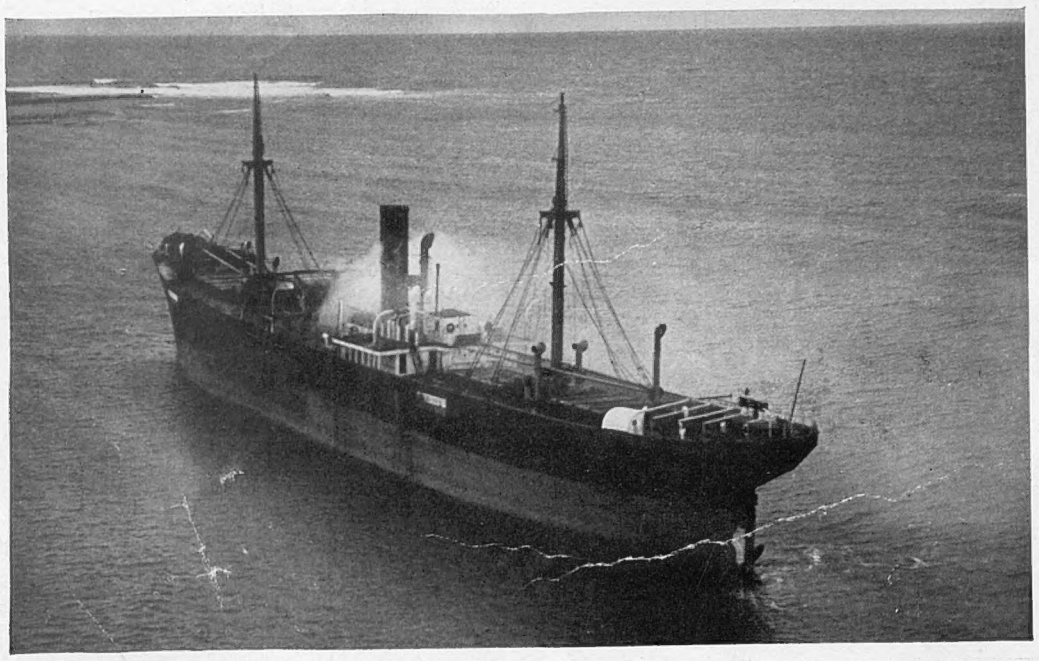
SHIPWRECKED CREW RESCUED BY LIFEBOAT

The Newcastle steamship *Dalryan*, of 4,500 tons, struck a mine about 6 miles off the south-east coast a few days ago. She sank slowly in full view of watchers on the pier and promenade of a seaside resort. All thirty-eight members of the crew, together with a pilot who was on board, were brought ashore safely by lifeboat; and here the latter, fully loaded with the crew, is seen coming inshore to port. The explosion was very violent and the *Dalryan* went down in a matter of a few minutes



A LONDON OIL-TANKER STRIKES GERMAN MINES

The day after the *Dalryan* was sunk, another British vessel—the London oil-tanker *San Calisto*—struck two mines off the south-east coast and sank; two of the crew were killed and seven were injured. The survivors—forty-one in all—were rescued by trawlers and by lifeboat and brought to shore. This picture was taken as the doomed vessel was sinking



A U-BOAT SETS A CAPTURED NAZI SHIP ABLAZE

The German merchant ship *Borkum*, which had been captured by a British warship and which was being taken into harbour by a prize crew, was attacked by a U-boat and set on fire by the Germans who evidently preferred to destroy their own merchant vessel rather than have it captured. There were no British casualties but four Germans were killed by the submarine's shell-fire. The *Borkum* was abandoned and driven ashore. Above she is seen lying in shallow water and still burning

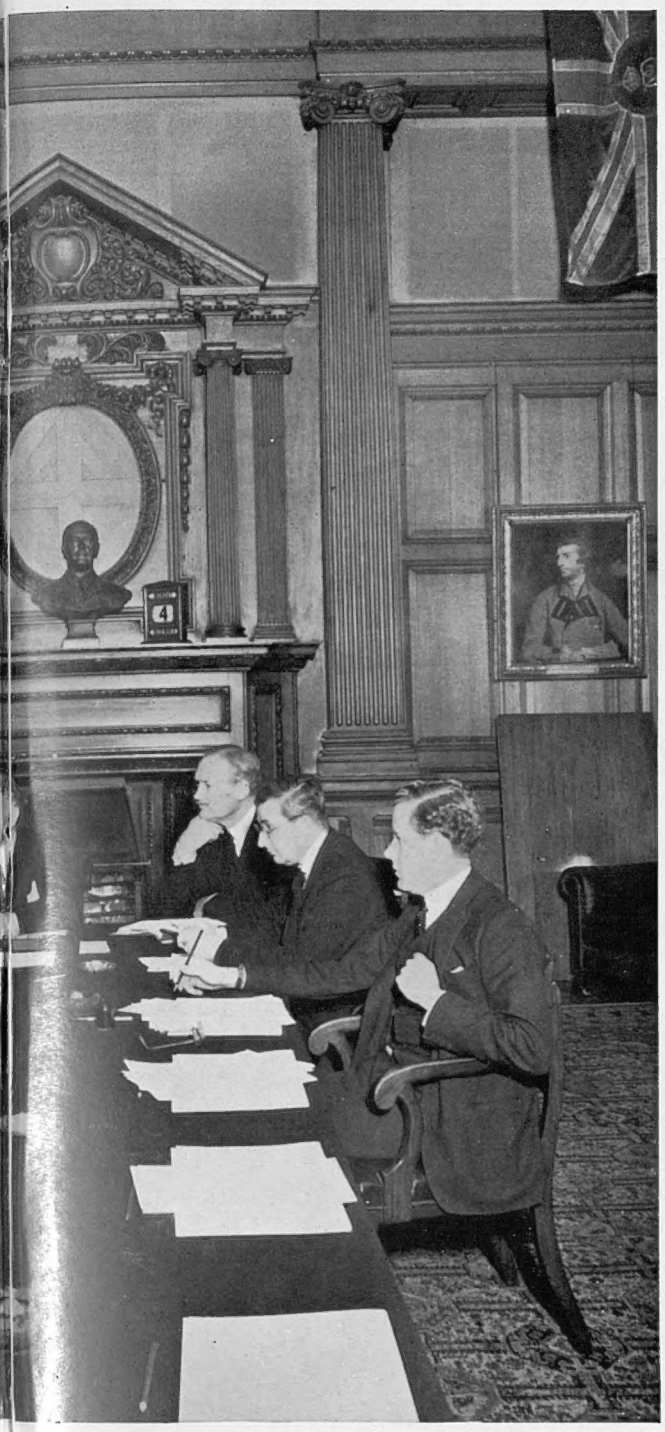
THE ARMY'S LEADERS in

THE ARMY COUNCIL IN SESSION

THE WAR MINISTER WITH THE QUARTERMASTER - GENERAL, THE ADJUTANT-GENERAL, AND THE CHIEF OF THE IMPERIAL GENERAL STAFF

In the upper picture Sir Walter Venning, General; General Sir Hore-Belisha, Secre for War; Sir James of the Army Council

COUNCIL. . . .



...e first picture to be taken in the historic Conference Room at ...e War Office whilst the Army leaders were actually in meeting

the following Army leaders are seen (from left to right): General Quartermaster-General; General Sir A. Gordon Finlayson, Adjutant-Edmund Ironside, Chief of the Imperial General Staff; Mr. L. tary of State for War; Lord Cobham, Parliamentary Under-Secretary Grigg, Permanent Under-Secretary of State for War and Secretary and Sir Victor Warrender, Financial Secretary to the War Office

DEALING with the MINE MENACE. . . .

A GERMAN MINE, OF THE "HORNED" VARIETY, WASHED UP ON THE BRITISH COAST AND AWAITING THE ATTENTION OF THE DEMOLITION SQUAD

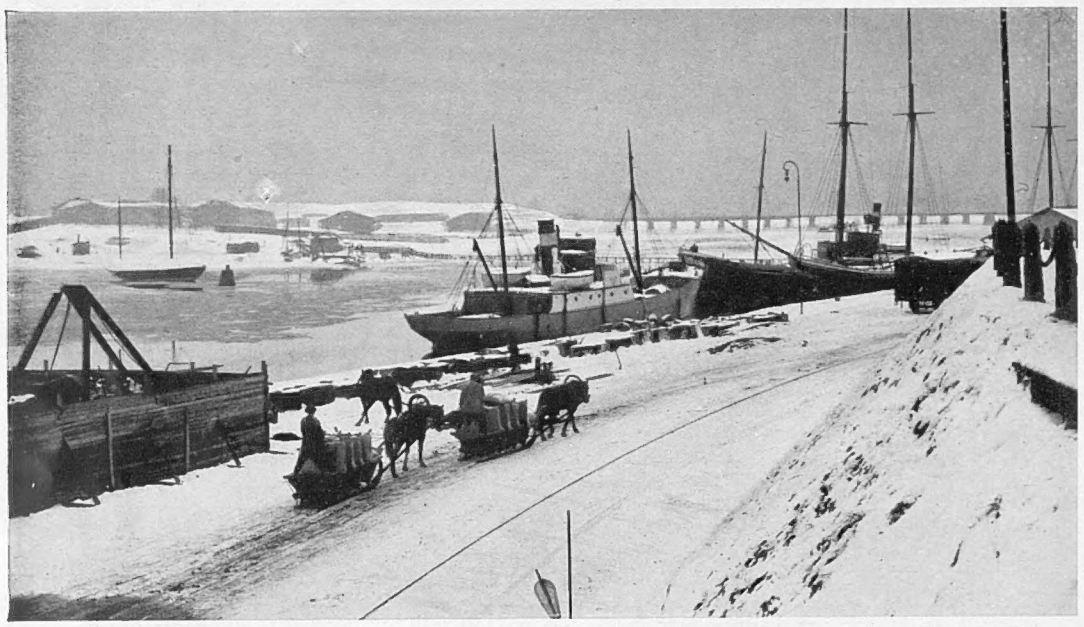
THE MINE-KILLING PATROL SETS OUT TO DISMANTLE A MINE, ARMED WITH A CASE OF EXPLOSIVES, DETONATORS AND FUSES, AND OTHER EQUIPMENT

REMOVING EXPLOSIVES FROM A MINE, WASHED UP ON THE BRITISH COAST: SIXTEEN LUMPS WERE TAKEN OUT OF THIS MINE AND WERE THROWN AMONG THE ROCKS, TO BE BURNED LATER ON

With scores of mines being washed up daily around Britain's lengthy coast-line, the mine-killing patrols are having a busy time dismantling and destroying them. The men engaged on this work are all experts at handling such dangerous weapons; as soon as information is received of the arrival of these unwelcome visitors, out goes one of these squads and within a very short while another menace of the seas has been rendered harmless

FINLAND ATTACKED BY RUSSIA: Thursday November 30

HELSINKI The very modern capital city of Finland was bombed for the first time in its history on Thursday of last week, when Russian planes flew over part of the city and dropped a small number of explosive and incendiary bombs. On the following day anti-aircraft guns were in action. All people leaving Helsinki were ordered to pour water about their homes and outside, so far as possible, and leave it to freeze with a view to minimising the effect of incendiary bombs



VIBORG Viborg, or Viipuri, was visited by Russian planes. A warning was received three times, but no bombs were dropped until after the third warning. There were reports that the Russians had tried to land troops by parachute behind the Finnish lines in the Karelian isthmus and near Viborg. But in both cases the parachutists were promptly crushed by the Finns

PETSAMO A cleverly devised retreat from Petsamo was followed by a brilliant recapture of this little northern port. The defenders sank every vessel in the harbour larger than a rowing boat. This not only prevented the vessels from falling into Soviet hands, but blocked the way to the docks for large warships. As the Russian vessels came close to the shore there were thunderous detonations as the overhanging cliffs and crags suddenly split asunder. The Finns had buried mines in the cliffs

FINLAND'S PREMIERS—OLD AND NEW
M. Risto Ryti (left), Finland's new Premier, who has been Governor of the Bank of Finland since 1924, and Professor A. K. Cajander, the former Finnish Premier who resigned on the outbreak of the war. This picture was taken during a recent reception at the Finnish Foreign Office

THE TWO MILITARY COMMANDERS OF THE FINNISH ARMED FORCES
Marshal Mannerheim issued a manifesto to his troops which was eagerly responded to. Associated with the marshal is Lieut.-General Hugo Osterman (*on right*)

BARON ERNST VON BORN, MINISTER OF THE INTERIOR IN FINLAND'S NEW WAR CABINET
For many years he has been president of the Swedish People's Party in Finland who represent the 10 per cent. minority of Finns of Swedish origin. Baron von Born is one of the richest land-owners in Finland and the head of the most prominent family in the country

At the opening of the week it was reported that severe snowstorms had held up the Russian attack and that the Finns were beginning to operate on skis as snow covers the entire land. The evacuation of Helsinki had proceeded to a great extent, and the foreign communities were also reported to be leaving the capital. A number of Germans refused to go on the relief steamer (reported to be very ill-rationed with food) which had been sent across the gulf from Germany. A new Government was formed at Helsinki on Friday by Dr. Risto Ryti. Its obvious purpose was to broaden its national character. It included M. Tanner and M. Paasikivi, who had been members of the Finnish delegation to Moscow.

GERMAN PRISONERS BY LAND AND SEA

INTERROGATED AFTER CAPTURE ON THE WESTERN FRONT

This picture, on examination, presents some highly interesting points. It cannot be said that the prisoner is faced by any terrible third-degree-looking officer or guard, but he is exhibiting a very depressed air. He is certainly not "cutting a figure" for the good of his country's propaganda!

THE NAVY BAGS ANOTHER U-BOAT AND LANDS ITS CREW IN BRITAIN

The captured crew of a German submarine seen as they were about to be taken ashore at a Scottish port. Most of the forty-three prisoners expressed distaste at their task of sinking defenceless ships and seemed glad that their share in this type of warfare is finished

BOTH SIDES HAVE GONE TO EARTH IN FRANCE

Whilst the Navy Intensifies its Grip; and Finland Struggles Against Hopeless Odds (The Strategy of the War—XI)

By GENERAL SIR CHARLES HARINGTON, G.C.B., G.B.E., D.S.O., D.C.L.

I ENDED my article last week on a note of warning as it was quite evident that there was a growing tendency in certain sections of the Press to put about an idea that Hitler was cornered and that Germany could not last long, and in any case had no heart for the struggle. That was very dangerous and I was very glad to see that Field-Marshal Lord Milne, in the House of Lords, had issued a grave warning to this effect, which I am confident will make many people realise that we are only at the beginning of this fierce struggle and that we have a very long way to go.

Mr. Chamberlain has also made it quite clear that it is the task of each one of us to concentrate first and foremost on winning the war. There will be lots of time to make plans for what happens after that. It was the long period in which nothing happened to hurt us which brought about the feeling that nothing would happen, and that certain provisions had been unnecessary. Startling events during this last week have, however, brought us back to grim realities.

The recent loss of the *Rawalpindi* has brought things nearer, and the gallant fight which she put up must have stirred everyone. Having done two journeys in her to India, one had a great affection for the old P. and O. boat. The ruthless sinking of neutral shipping by mines and U-boats, against all the rules of international warfare, can only strengthen our determination to go right through to the end. You can fire guns for practice or safety reasons with what are termed "reduced" charges, but you cannot make war like that. Every charge must be a full one, and must cause the hardest possible knock.

There is nothing to report from the Western Front except boredom. One senior staff officer writes me that life is like one intensive staff exercise, with scheme after scheme so as to be ready for any eventuality. The war correspondents must find time hang very heavy. The C.-in-C., Lord Gort, seems to have been photographed in every position except asleep. What a change from the last war! At the same time, delay has been all in our favour and each day brings the great reinforcements of our Dominions, both in men and aeroplanes, nearer. Mr. Menzies has made clear, in no uncertain terms, the purpose for which they are coming.

It is curious when one compares the present form of warfare with that of the last war. In that one our losses were so heavy when our troops were launched against a strongly entrenched enemy that we said, "Never again will we launch the infantry soldier with only his rifle against prepared positions. We will do everything with machines. Tanks will burst through or over anything, wire, pill-boxes, defensive areas, etc., and the infantry will follow and will suffer little loss. No more static warfare. We don't want horses any more, nothing but machines." We spent years since the last war experimenting with every form of tank, armoured car, machine-gun, Bren gun, truck, etc., and to-day two great armies twenty-one years later are facing each other behind what are termed "impregnable" lines.

Both sides are armed to the teeth with all the latest forms of machinery, and yet it does not look, up to this moment, as if either side had any intention of hurling its men at the other for fear of the frightful loss which it would entail. It would appear, therefore, that this vast machinery has in this case really tended to slow up warfare than the reverse. I grant that this state of things is peculiar to this war and is only brought about by both sides having gone to ground to a great depth. In Poland and Spain it was different, as this type of defensive position did not exist and machines and aeroplanes could be active against troops on the move.

On the Western Front there is nothing for the air forces to find in human beings. All are underground. No doubt all photos required have been obtained, and the artillery of each side can only shell back areas and roads in the rear of the other side just as in the last war the Germans used to shell the old road from Poperinghe to Ypres which many of us remember so well. No doubt when the flag falls there will be some violent bombing of back areas and towns, but many of the latter will have been evacuated.

Meantime, we continue to be lost in admiration of the splendid determination and fighting spirit of the R.A.F. That youngsters who till a few weeks ago were working in offices daily or on the land can now be fighting and destroying enemy planes almost daily, must make us truly proud of the present generation. I wonder if Von Ribbentrop prepared Hitler for this? He is reported to have said that we would not fight. Anyhow, a good number of German airmen have found the reverse, to their cost, and it is quite likely that many more will also do so.

The fact of 463,000 tons of contraband having been seized, the statements that the Dutch will continue to sail, that Rumania is curtailing her oil supply to Germany, and that big German contracts with America have collapsed, cannot be pleasant hearing for Hitler. His answer is bound to be "mines," but unfortunately for him they cannot be laid by threats alone. His U-boats and seaplanes have got to come and do the laying. There is both a time and a breaking limit to that job. The solution of that problem can well be left to Mr. Winston Churchill and his British and French advisers. The main point is that the British and French navies gain more control daily.

As I write, the situation of the Finns is serious. Stalin seems to have copied exactly the tactics of Hitler regarding Poland, and without even waiting to open the envelope containing further suggestions from the Finnish Government, he has let loose his forces by sea, land and air. Another wretched country has now to thank Hitler for asking Stalin to join in the pillage of Poland. One wonders whether the mopping up of all these smaller states was foreseen at the time by Hitler, or is it possible that this was all part of the plan agreed upon? What happens next? Will Norway and Sweden receive leaflets telling them that they will be far happier under the Russian yoke? Is it possible that Hitler held back his recent threat to Holland and Belgium because he was waiting for the attack on Finland to take place?

The neutral states, or the majority of them, appear to be angry with us over the recent Order in Council. No doubt they will be inconvenienced to a certain degree, but where would they be if we did not win the war? They know quite well that they had better put their money on the Allied Naval and Air Forces. Their own future depends on their being on friendly terms with the winning side. The Finns have many friends and the U.S.A. has shown quite clearly what she thinks of this recent outrage. Hitler, apparently, is not surprised. Having probably been "in the know" from the start, one can hardly expect him to be surprised.

It is always said that the keynote to success in war in the field is surprise. It is as well that it does not apply equally off the field or these two pioneers of evil would have had a long lead by now. Hitler undoubtedly sprang the first surprise by bringing in his friend to make sure of mopping up Poland quickly. Since that time Stalin has provided the surprise packets in picking up the Baltic States one by one and at the moment is engaged in this dastardly attack on Finland. Although their methods in each case have been identical it would seem that Stalin has in this case made a new move in setting up a government of his own choosing in someone else's country, composed apparently of Communist "puppets."

The Finns are undoubtedly showing the good stuff of which they are made, and are determined to go down with their colours flying, if they have to go down. I see it is reported that the Russians have attempted to land by parachute. I cannot think that there will be many volunteers for that method of procedure. I once helped in the Great War to rescue an officer whom I saw descending into Lake Zillibeke in the Ypres salient. He came down into thick rushes and was so tied up in ropes and rushes when we reached him that, had he been an enemy, I could easily have killed him with a penknife.

That incident reminds me of another parachute story, of a retired officer, some forty-five years of age, who volunteered for service in the last war, and who was posted to a balloon section in our Second Army. The very first day he went up he was shot down and had to jump for it by parachute. He went up again next day and the very same thing happened. After that we posted him to a more sedentary job.

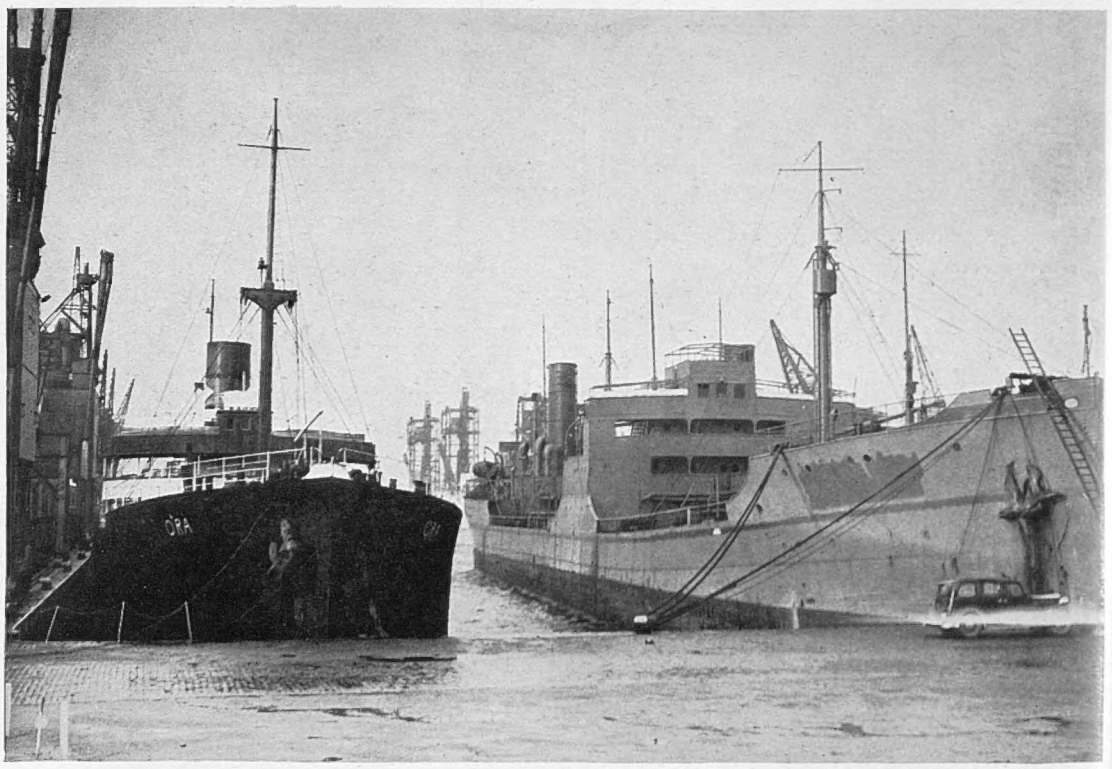
There can be no mistake that the wanton attack on Finland has deeply stirred not only Europe but the whole world. It has caused much anxiety to the smaller countries who only want to live in peace, and also to the larger ones.

The danger in Europe to-day seems to be that you have two bears prowling about, the big bear and the little bear. One is up against very big bars in the west which makes him very cross, especially when he hears that the other bear is on the loose eating up another victim. It is quite likely that in spite of the size of Europe these two bears will scent each other, and will meet one day, and there will be a real scrap to decide which is the big bear and which is the little bear. With what joy the rest of the world would look on from the ring, and see one of them counted out! It is more than likely that the winner would also be badly mauled and have to lick his wounds. When that happens the world will be happier, and a new world in which peace at long last will reign will be nearer.

To summarise the situation at the moment of writing, we have to our credit the ceaseless activity and vigilance of our Navy and Mercantile Marine in their great task, the continued successes of our Royal Air Force, and the early prospects of reinforcements both in personnel and machines, the calm readiness, the good heart and spirit of the Allied Army. Behind it all we have the grand and increasing determination of our whole Empire and of our Allies to face whatever may lie before us.

On the other hand, we cannot fail to take into consideration the fact that the Russian action against Finland has undoubtedly aggravated the general situation. It is an old saying that you cannot have two kings in Brentford, so for the moment we look on and await what happens. That may equally apply to bears. It is all very difficult to realise what is happening in this oddest of wars.

We, with our Allies, having got down, much against our wishes, to grips with Germany, we suddenly find that another power, not in the contest at all, has butted in and dropped an enormous bomb just outside the arena, and for the moment seems to have distracted much of the attention from the main match. It is just as if when we arrived at Wembley to watch a Cup Final being played between the two strongest teams, we were met at the gate by someone who told us that there was a much more exciting contest to witness in a neighbouring field, and one in which one of the sides observed no rules at all.



A FIRST PICTURE OF BRITAIN'S NAVAL PRIZES: MERCHANT SHIPS CAPTURED BY THE ROYAL NAVY

These two German vessels, both captured at sea by the British Navy, are now safe in a Scottish port. On the left is seen the S.S. *Konsul Hendrik Fisser* and on right is the oil tanker *Biscaya*. The *Konsul Hendrik Fisser* was masquerading as a Norwegian ship, the *Ora*, when captured

WOMEN IN THE WORKSHOPS

Preparing for Positions in the British and French Munitions Industries

WORKING SIDE BY SIDE WITH THE MEN

This picture was taken at the factory of one of the largest optical instrument makers in the country—at present engaged upon contracts for the Ministry of Supply. Here are made such instruments as binoculars, telescopes, photographic lenses and other scientific devices; and the above picture shows the only girl worker engaged in the machine-shop

FRENCH WOMEN ALSO GO IN FOR MUNITIONS WORK—TWO EX-TYPISTS, TURNED LATHE-HANDS

Like their English sisters, French women are also entering on munitions work, ready for the big offensive when it comes. At the Centre of Apprenticeship for War Industries' Workers, women are now being trained in Paris to replace mobilised men. After an apprenticeship averaging from three weeks to three months, according to the degree of specialisation required, they are then drafted to factories engaged on national defence work. Many of these girls specialise in the making of more delicate aeroplane parts, as well as precision work such as adjusters, moulders, riveters, lathe-hands, drillers and other such jobs. The women come from all classes with a sprinkling of stenographers, mannequins, fur workers, modistes, jewel polishers—all trades which have been hit, more or less, by the war. Many others are married and obliged to work to keep their families together

BEAUTY GIRLS TAKE UP "HEAVY INDUSTRY"

Many girls who have been working in beauty parlours and women who owned their own beauty businesses are amongst those who have applied to the Women's Engineering Society for a course in engineering with a view to becoming supervisors in munitions factories. Here one of the former beauty parlour girls is seen at work in her munitions class

MISS TRIPPICK BUSY IN THE ENGINEERING SHOP

Women are now being trained at the war-time workshop for women at the Paddington Technical Institute in Saltram Crescent, London, for factory executive positions as charge-hands, forewomen, etc., for munitions work in war-time. Each course is of three months duration; and the women meet on five afternoons each week. The course consists largely of lectures, demonstrations and practical work at the benches in the workshop, reading blue prints, as well as a series of lectures on foremanship and factory administration

AT A BRITISH ARMS FACTORY

A girl worker blowing hot-air into fuse caps which are destined for big shells

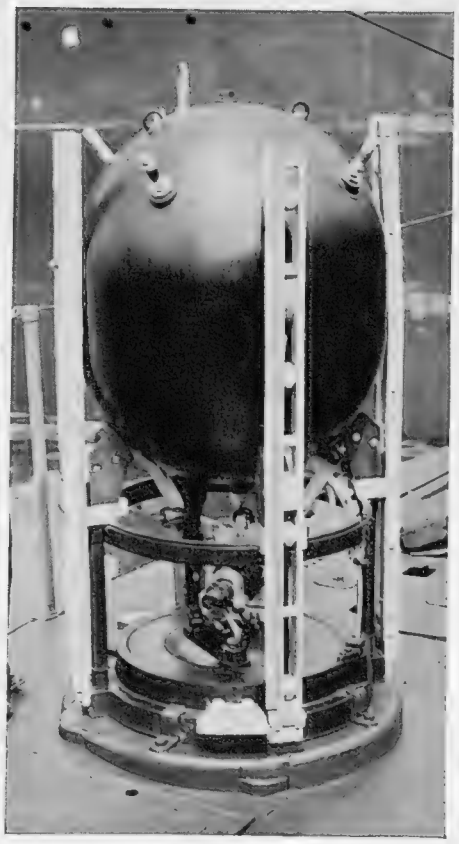
THE MINE THREAT TO ALL SEA-BORNE CRAFT

The Various Types of Explosive Eggs Now Being Employed

Described by FRANK BOWEN

DEADLY VISITORS ON THE DANISH COAST During the stormy weather of the past fortnight numerous mines have been washed up on the Danish coast. The explosions have been severe in some cases, and the noise has been thought to emanate from some conflict in the vicinity

MINING, which has been the pet weapon of the German Navy since its earliest days, succeeded in sinking more Allied ships than any other method during the late war, so that it is not surprising that it is being used to an unprecedented extent in the present struggle. The Germans have obviously been making long and very careful preparations and have constructed a huge number of mines carrying the new and very powerful explosive evolved by German chemists some five years ago. It should be noted, however, that there is nothing novel in either their minelaying methods or the design of their mines; both have been tried and fully discussed and their admitted success is what is to be expected in the early days of every change of practice, as it is impossible for any navy to maintain full protective measures against all possible forms of attack. The ordinary form of contact mine, as generally used, is a sphere or pear-shaped container of sufficient size to contain the explosive charge, mechanism, and enough air to give it buoyancy to keep it at the full scope of the wire mooring by which it is attached to its sinker at the bottom of the sea. Round the top are a number of horns which, when struck with any force, will detonate the charge. They are made of soft lead, lined with rubber to prevent accidents, and are designed to bend with a blow of a few pounds weight. This breaks the glass tube inside each horn containing acid which, running into the centre of the mine, agitates an electric circuit sufficient to set off the detonator which in turn sets off the main explosive charge which is generally 300 lb. in weight.



A GERMAN MINE EMPLOYED DURING THE GREAT WAR This type of mine with its supporting arms and neatly constructed base aroused intense interest in British circles when specimens of the type were captured

The slight delay in this form of detonation permits the mine to get well under the ship before it goes off; an instantaneous explosion would cause the damage to be right forward in most cases, and the ship would often be saved by her collision bulkhead.

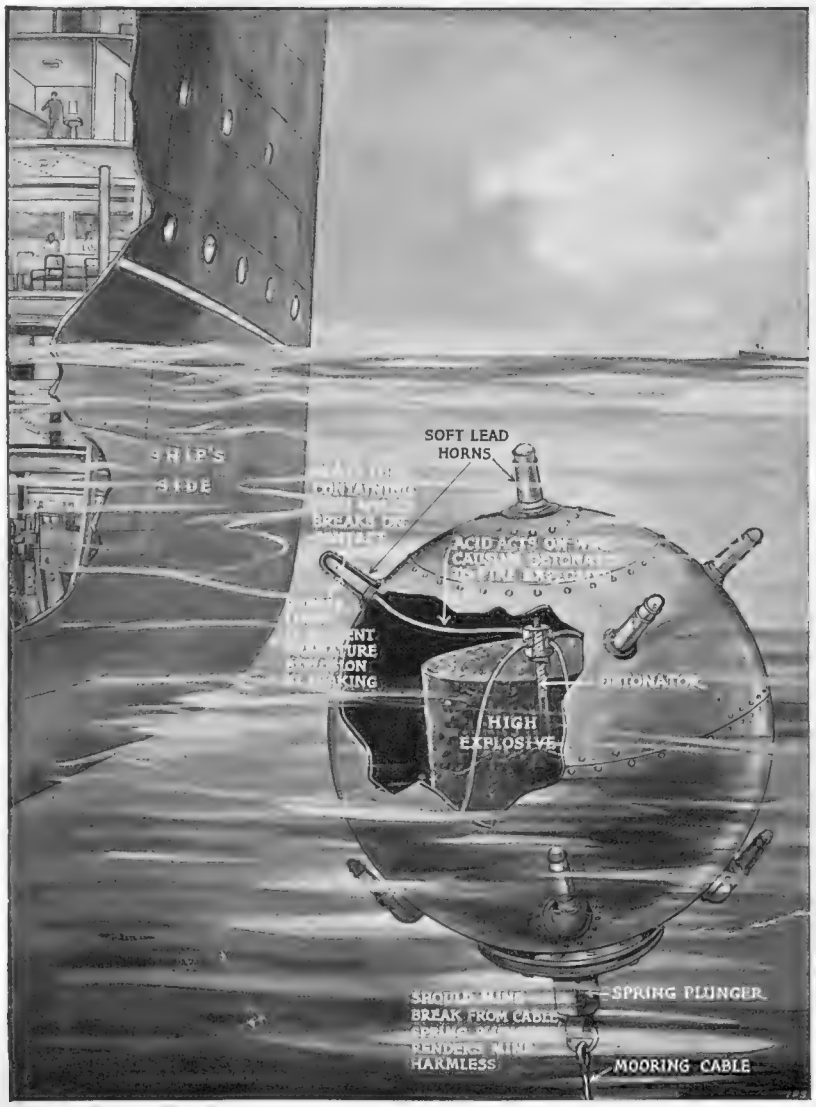
For some years past two variations of this type have been the subject of experiment and speculation; one is the antennæ mine and the other is the magnetic. The former is used principally against submarines and instead of the leaden horns has long electrified wires or "feelers" stretching up towards the surface which will detonate the mine when touched. A submarine can be damaged by a mine explosion at a much longer range than a surface ship; she may not leak so much that she sinks to the bottom, but she will be forced to come to the surface, which is all that her hunters ask. The use of antennæ mines saves laying huge numbers of contact mines at different levels—there were 120,000 in the famous northern barrage of 1918—in order to catch the U-boat at whatever depth she may be navigating. The second type is the magnetic mine, about which so much has been heard recently, which was tried with very poor success about twenty-two years ago. It can only be used in very shallow water against surface ships and is not fixed to a sinker like an ordinary contact mine. It lies on the bottom and is detonated when a mass of steel sufficiently large to actuate an electric current passes very close to it.

The importance of the MINE as a weapon of sea-warfare cannot be overlooked. It is proposed, therefore, to deal with this matter in a further edition which will give the fullest possible details relating to this vital matter. Here in this article the various types of mine are mentioned in a general survey; the supplementary section mentioned above will follow at an early date.

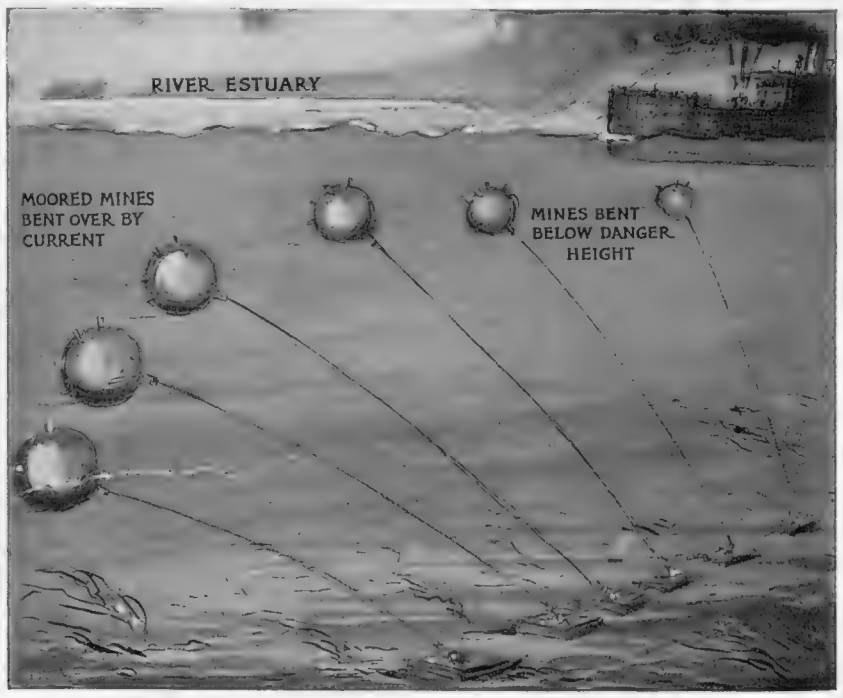
Having no mooring to cut, it is naturally very much more difficult to sweep up, but it is also much more difficult—and infinitely more dangerous—to lay.

Yet another type which has been the subject of unsuccessful experiment for years, and which also does away with the mooring wire, is the oscillating mine which is set adrift with very slightly negative buoyancy. As soon as it sinks below its set depth a horizontal propeller under it starts to revolve and pushes it up again; when it gets too near the surface the reduced pressure of water acts on a valve, the propeller stops and it begins to sink once more. Its use is only practical where there is a constant current setting towards the enemy as there was against us in the Dardanelles.

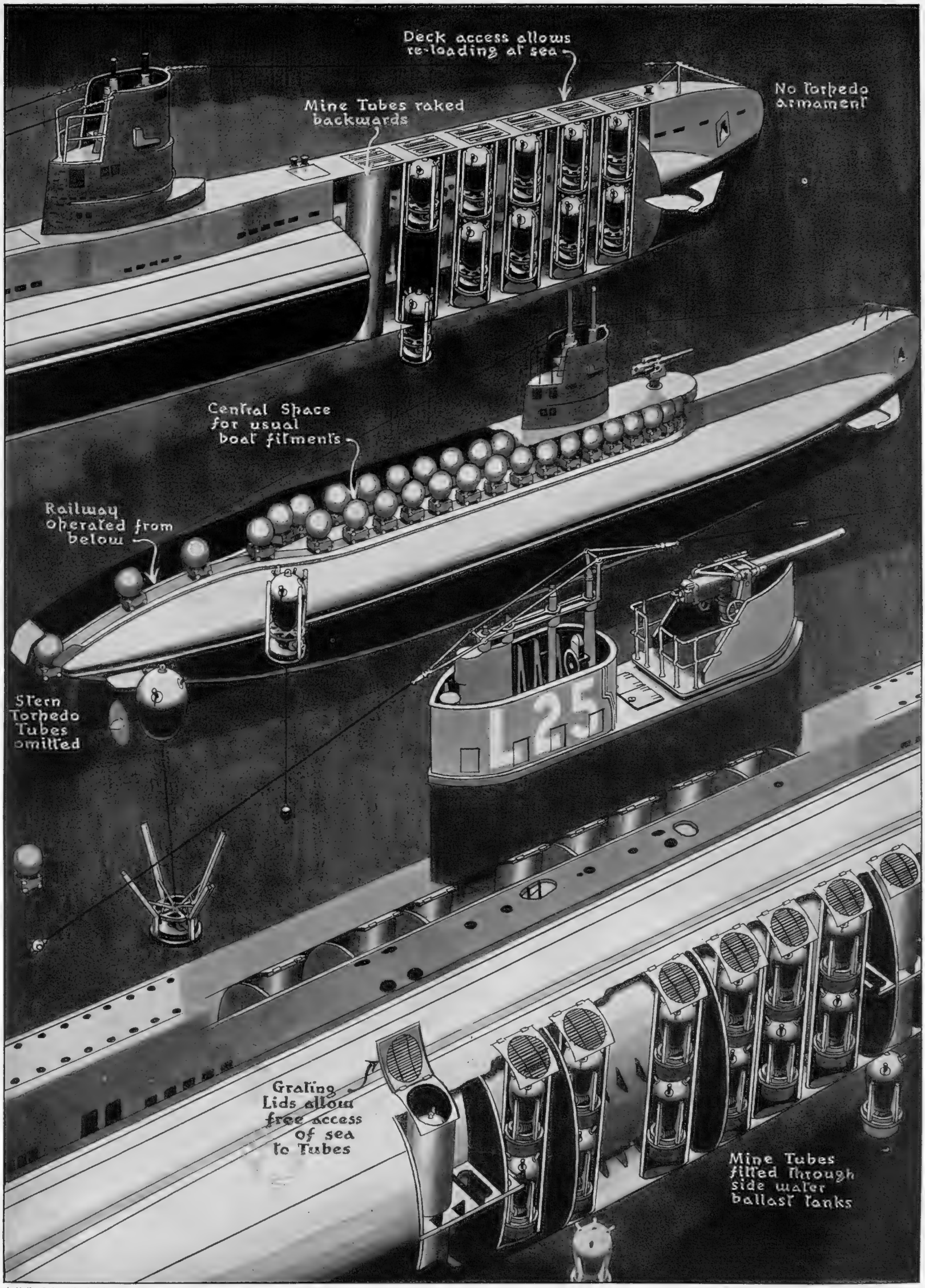
Finally, there is the floating contact ("bubble") mine such as the Germans have been laying with aeroplane and parachute. A floating mine is always far less effective than a submerged one; it can be seen by the look-outs in daylight, it is generally thrown aside by the bow wave of a ship travelling at any speed and if it does explode the greater part of the force follows the line of least resistance through the open air instead of through the hull of the ship. But it can do damage and can be dangerous in a narrow channel or crowded anchorage.



THE INTERNAL MECHANISM OF A MOORED MINE OF ESTABLISHED TYPE The sensitivity of the mine is obtained by employing a number of projecting fingers containing acid which acts on the internal detonator. The explosive compound is contained in a central receptacle, connected by wires with all the contact horns



HOW A STRONG CURRENT RENDERS A MINE INOPERATIVE If one attempts to block a river opening which is "fed" by a fairly voluminous stream the current will pull the mines over until they are almost horizontal



Artist's Copyright in U.S.A. *Drawn by S. W. Clatworthy*

HOW MINES ARE LAID BY SUBMARINES

The Three Main Types Compared

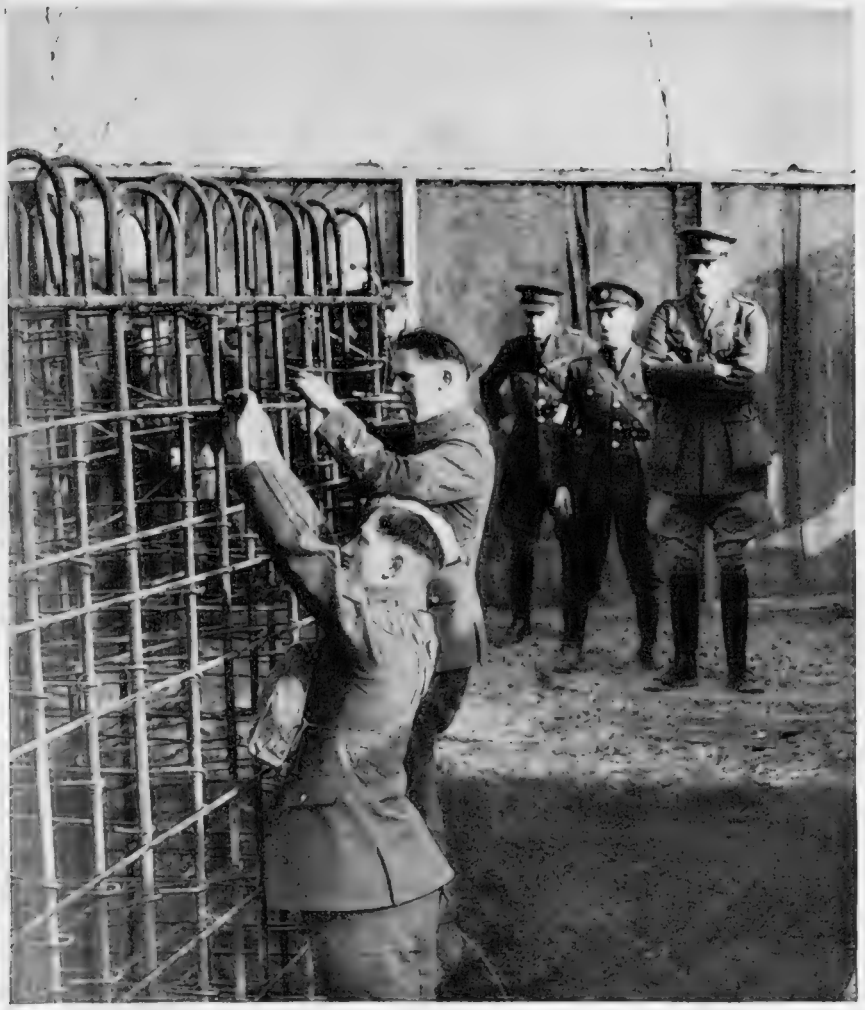
World-wide interest has been aroused on the question of the indiscriminate laying of mines by German vessels. This is largely taking place from submarines; and here two types of German minelaying submarines are shown in section. The upper one is a coastal U-boat carrying twelve mines; the centre one an ocean U-boat carrying fifty or more mines—a kind of diabolical cod's-roe. The lower picture shows a British minelaying submarine containing thirty-two mines. The top drawing and the bottom one show the mine tubes common to both types. The centre type carries its mines on a miniature railway

DISPATCH RIDERS IN THEIR SMART KIT ARRIVE IN PARIS

The dispatch rider's work is difficult and dangerous. Roads in this part of France, with their high camber and greasy surfaces, are perilous, and, despite urgent orders demanding the greatest precaution, a number of accidents involving broken limbs and minor concussion have already occurred. Three or four thousand messages a day stream in and out of dispatch rider headquarters, and all are checked, examined for correct address, and delivered within an incredibly short space of time

DESPITE THE MUD THE GUNNERS, DISPATCH RIDERS, AND BLOCKHOUSE BUILDERS ARE CHEERFUL IN FRANCE

"Wandering through the villages you came on this kind of scene—the dampness of the day had not repressed this wag who is, by the way, a very good letterer. Wandering on, one arrived at a gun position. We had to get very close before we could see any signs of it, so cleverly had it been hidden, except an occasional figure emerging from a hole in the ground. Closer examination revealed guns and instruments manned. Everybody was muddy but cheerful. It was difficult to realise that these muddy moles were the same people whose bowler hats of felt instead of steel were coming up out of the hole that is the Bank station. They have been on duty in one place or another since August 5 and are by now old soldiers. And if you knew where, you could, until recently, come on the kilted men whose boots were not as clean as others, for they happened to be filling sandbags at a dirty spot, and they were wearing the kilt, which many still maintain is a very serviceable and healthy garment in the battle line" (*see above on right*)

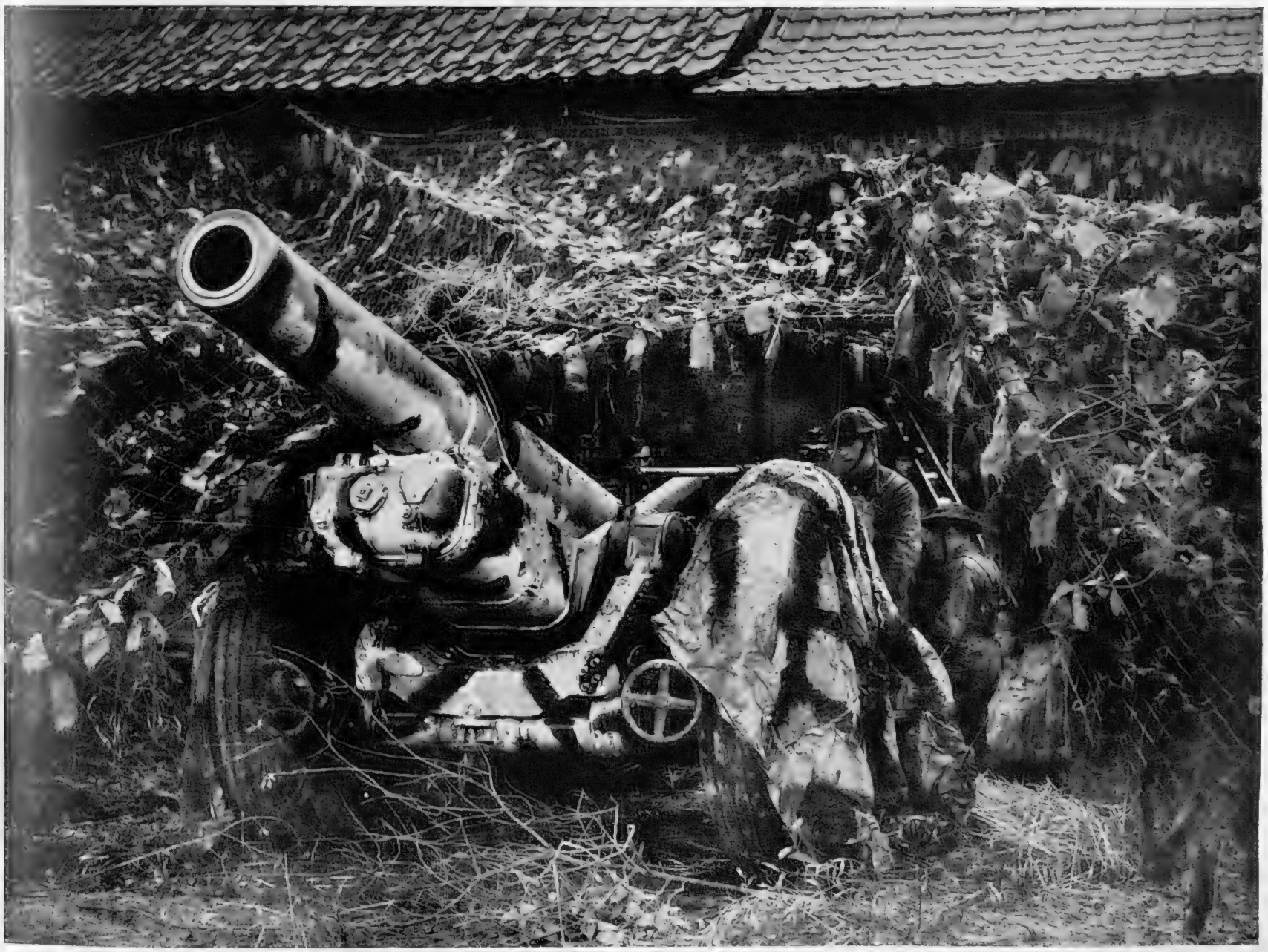


BUILDING A BLOCKHOUSE BEHIND THE BRITISH FRONT

All kinds of work with timber, concrete and steel have been going on steadily, so that the positions are becoming very strong and fit to live in

THE LUNCH INTERVAL FINDS YOU WHERE IT WILL

So even the highest in command take to the sandwich and the sherry flask. Here is Lord Gort (right) C-in-C., with Lt.-General A. F. Brooke (left)

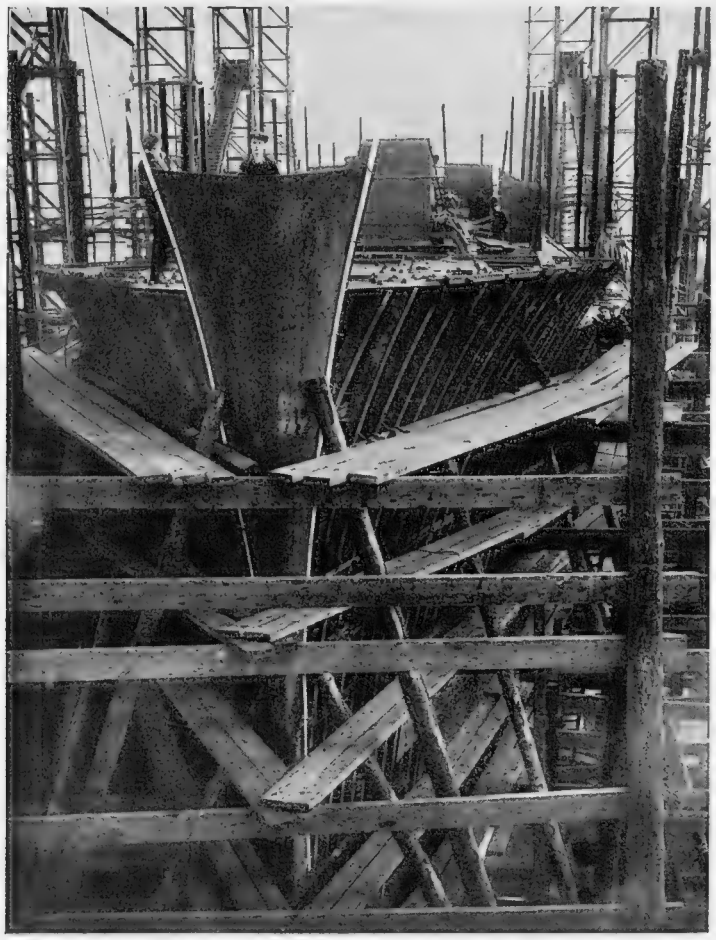


STRIPED WITH NEW PAINT IS THIS BIG-MOUTHED GUN BEHIND THE BRITISH POSITIONS

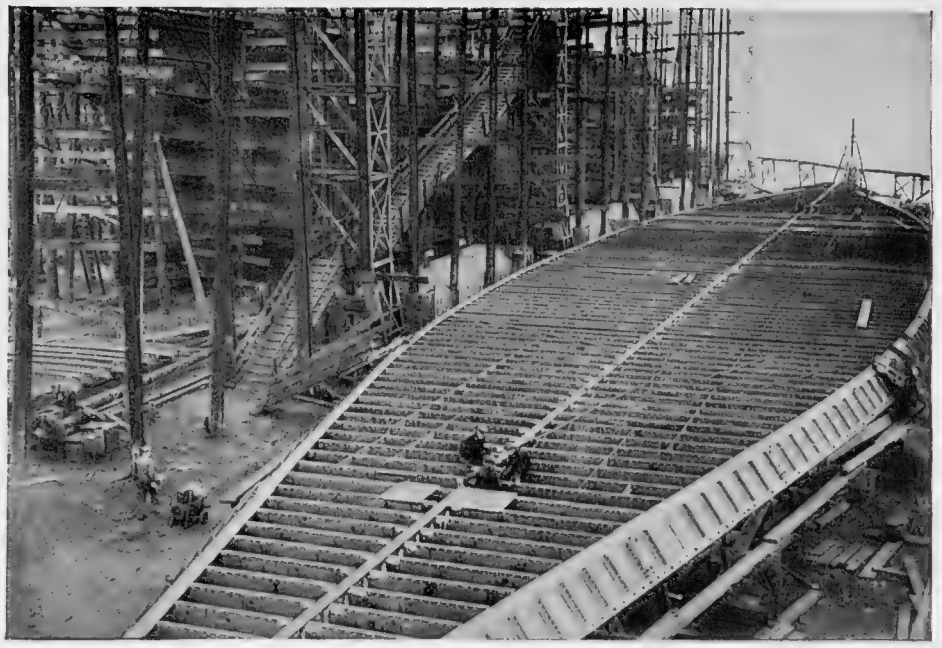
This is where the coarse netting which is being made "somewhere in Britain" is being used in conjunction with proof-coloured cloth; these harmonise with the local tones of the French countryside

SHIPYARD versus U-BOAT

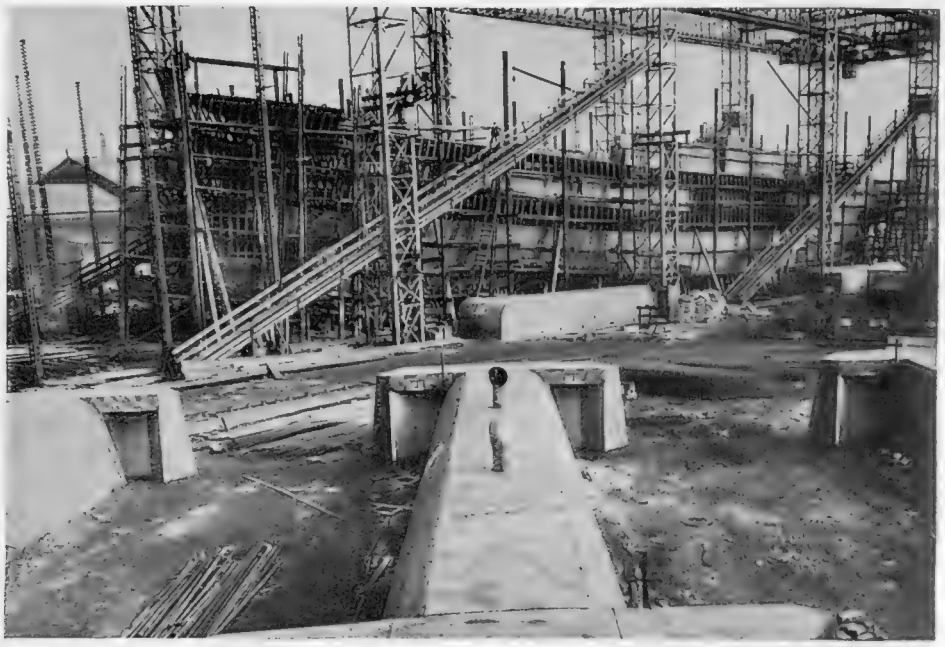
And the Shipyard is Winning Handsomely



THE BIRTH OF A SHIP Looking along the keel of a new ship a. the yards. In a week or so the ribs will rapidly be taking shape, reaching up to the sky



RAPIDLY NEARING COMPLETION Looking along the deck of one of the cargo ships under construction at the shipyard

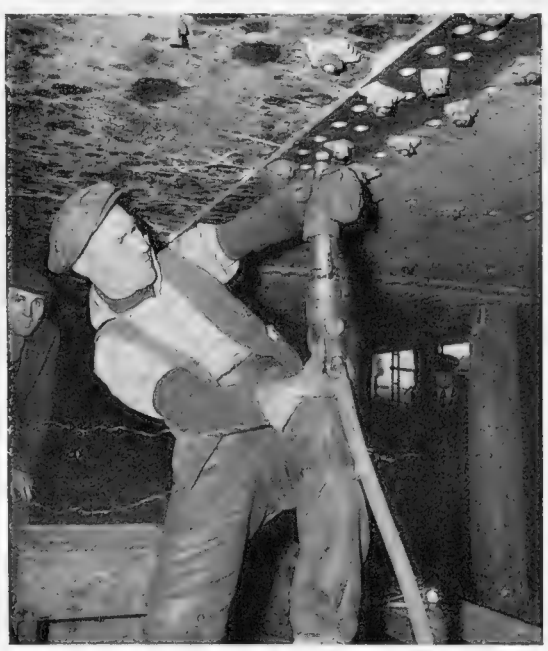


A WARLIKE ATMOSPHERE IS GIVEN TO THIS SHIPYARD BY THE AIR-RAID SHELTERS IN THE FOREGROUND A cargo ship in course of construction can be seen in the background

LEAVING THE FURNACE A white-hot girder is being laid down to be bent to form a rib for a cargo ship

Despite the savage U-boat warfare on our merchant vessels, figures since the outbreak of war show that our shipbuilding industry is more than making up for losses incurred. New ships, captures and conversions have given our Mercantile Marine more tonnage than ever—although thousands of tons of shipping have been sent to the bottom. Within the next few weeks the first of Britain's war fleet of cargo steamers will glide down the slipway. From then until further orders British shipyards will be turning out ships like motor cars. In the week ending November 12 the British Mercantile Marine showed an increase in strength of 24,000 tons after deduction of losses. This increase in British merchant tonnage answers German claims that the maritime trade and that the British Contraband Control system is having an adverse effect in making less tonnage available. These pictures taken "somewhere in England" confirm how the shipbuilding of Britain is more than overtaking the efforts of the enemy's submarine warfare.

After a white-hot girder has left the furnace it is bent into shape to form a rib for a cargo ship



A riveter at work beneath a new ship

Punching holes into the plates with a pneumatic punch. The pieces are made up like a giant jig-saw puzzle

TANK v TANK

and the ANTI-TANK GUN as a Countercheck to THE MOVING FORT

The types of tank developed by the British Army during the years immediately preceding the outbreak of war were described and illustrated in "The Sphere" for November 25, 1939. The task of this present section is to show the battle possibilities of the tank and the manner in which its undoubted powers may be checkmated or absolutely brought to nought. How successful will a charge of the new cavalry be? It no longer has the psychological influence of novelty. All the great powers possess tanks and so know by first hand observation what its capabilities are. It had one or two spectacular successes in the Great War; can these be repeated? Victory will depend, it would seem, on the quality and numbers of the opposing tanks and anti-tank devices. A French expert writing of the result observed in the recently concluded civil war in Spain said: "Whenever a tank attack has met with strong well-handled anti-tank defences, it has been annihilated and immobilised, and has failed to accomplish its task. When such defences are lacking, or are no longer intact, the tank attack has gone home with almost mathematical precision."

One of the big tanks of the Great War crashing its way through German trench lines. Reproduced from an illustration in "The Sphere" of December 2, 1916

IN a recent issue of THE SPHERE I drew attention to the fact that so far there had been no opportunity of testing the tank as a major weapon against an adversary of its own size and equipped with modern anti-tank defences. I further pointed out that the tank was evolved as a means of restoring initiative to the offensive. Thus it is regarded by some commanders to-day—perhaps Hitler may be among them—as pre-eminently the spearhead weapon of a new war of movement. The Germans employed it thus in the Polish campaign, when armoured columns penetrated swiftly into the enemy territory, and occupied key positions.

There, however, tanks were operating against inferiors, and the campaign has few lessons for those commanders on the Western Front who are awaiting their first engagement with equals.

All modern armies have become singularly adept at the art of preparing tank "booby-traps," which range from cunningly-concealed pits, of the kind used by our remotest ancestors for the trapping of wild animals, to the most modern "asparagus-beds."

The last-named are clusters of pyramid-shaped concrete ridges or posts, set at clever angles to foul the driving tracks of tanks, and often stretching across miles of barrier country. These may be supplemented in another place by long rows of huge iron girders, clamped together crosswise, such as the Poles used with some success against the German motorised columns. Such defences naturally require long and careful preparation, and it is true that once they have been breached by artillery fire they are not much further use.

This does not apply to some other methods, notably that of wire-entanglement. I should say that this method would cause the tank people perhaps the most discomfiture of all. Wire can become so entangled in the tracks of a tank that there is no dealing with it. The more you try to disentangle the stuff, the worse it gets, that is, if the enemy allows you to alight and investigate. Then there is the method of planting land-mines in the path of any possible tank advance. Not only can these be exploded by the passing tanks, with dire results, but they can also be controlled from a distance by means of electrical impulses.

These are actually but a few of the devices in use for the "prevention of tanks" in modern warfare. Most armies possess others that have not yet been revealed, and who knows but that one of them may spell the final discomfiture of the tank idea? Above all, there remains the very important factor of the weather.

If tanks are light enough to escape from mud, then they have insufficient armour protection to resist anti-tank weapons, and if they are to be heavy then they must be immobilised inevitably after a spell of bad weather. Already in this war we have had the spectacle of German tanks and heavy artillery hopelessly bogged on the Rhine-Moselle front during that period at the end of October.

I come finally to the question of the anti-tank weapon proper. There are two kinds, the light rifle or automatic rifle, calibre not exceeding 1-in., and the anti-tank gun, of 1-in. to 3-in. calibre. We were told the other day that each battalion of the British Expeditionary Force now carries at least twenty-two anti-tank rifles, as well as other weapons suitable for the purpose. It has been demonstrated that such rifles can pierce the armour of light and medium tanks. The heavier guns can defeat the largest tanks yet brought into action.

The only weakness of the anti-tank defence, indeed, is the heavy calibre of these anti-tank guns, which gives them a conspicuous flash, so that they cannot be easily concealed from enemy artillery. There is a school of thought which considers that the heavy guns will not be so useful for this reason, and which advocates the development instead of some other weapon—to attack the *weakest* rather than the strongest point of the tank. It is advocated that the monsters be allowed to advance to a considerable depth, then be surrounded and attacked and their tracks clogged.

But whatever the method employed, there is a growing realisation—or anticipation—that the tank will by no means have things all its own way in combat with its equals. The early successes of this weapon were almost entirely due to its surprise tactics. General Fuller has recorded that at Cambrai "when the tanks moved forward . . . the enemy completely lost his balance, and those who did not fly panic-stricken from the field surrendered with little or no resistance."

As a writer in the *Journal of the Royal United Service Institution* points out, the tanks did not gain that victory "by shooting Germans; for the battle was in fact won before the tanks had fired a shot and might have been won almost as easily if their armour had been made of paper."

Actually the tank, like all legendary monsters, is a bogy-man primarily, with all the characteristic disadvantages of the ogre of fairyland, the lumbering gait, awkward weight, and "one eye only in the middle of his forehead." It is all very well to charge across No Man's Land, but it is necessary to do something when you reach the other side—and that is just where the tank is at a disadvantage.

The modern infantryman is being encouraged, moreover, to treat tanks with rather less respect than his father, and is being supplied with new weapons with which to attack them at close quarters. In the last war tanks were often immobilised by infantry with grenades, and even with pistols—poked into cracks. And finally, the invaders would always have to meet the counter-attacks of the defenders' own ironclads, a prodigious clashing of steel on steel.

I utter this word of warning, however, that all these matters are still highly controversial, and yet to be tested in the fatal fire. It does seem, nevertheless, that the tank will not prove a weapon of decisive importance in a war against "equals," although it may always be redoubtable against "inferiors." Armoured vehicles of all kinds will, of course, become increasingly useful. But the tank itself as a major offensive weapon is a different proposition — and I like to remember Crecy.

Donald Cowie

AN ACTUAL RESULT OF TANK AND ANTI-TANK COMBAT

This battered gun formed part of the anti-tank equipment of the Polish Army. It had evidently received a nasty hit from German gunfire

FIGHTING THE TANK WITH RIFLE AND GUN: Specia Picture

THE NEW BRITISH ANTI-TANK GUN IN POSITION FOR OPEN WARFARE

The wheels have been detached, and the tripod struts have been bent out in their proper positions. The gunner is looking through the sighting slot

A LIGHTER TYPE OF NEW TWO-MAN ANTI-TANK GUN

This type can be rapidly run forward by a couple of men, slung round and fired in the position shown. A light-hinged shield affords some protection for the gunners. The handy little shells are seen on the ground in front

WHATEVER tank material the enemy may possess, it will meet a hot reception from the British anti-tank guns, rising in size from the bullet-firing rifles to the 3-in. shell-firing weapons. The new types shown here have just come from the armament factories and embody the latest theories on this type of weapon. The two-man guns are beautifully made and the squads who work them must be getting very proud of these little barkers.

The bigger gun, with a noisy voice, has been cleverly thought out. It unpacks in skilful fashion, the wheels coming off and the struts fixing the gun firmly in position.

The exact method of employing this type of gun and the success of them is one of the things which can only be tried out and judged upon in actual combat. There is no indication here of the guns being employed

Above—Another view of the larger anti-tank gun showing recoil chamber, ammunition boxes, etc.

On left—Practising with the anti-tank rifle firing a tank-piercing bullet

BEHIND THE SHIELD OF THE NEW BRITISH ANTI-TANK GUN, WHICH HAS ONE OF THE NOISIEST DISCHARGES

The crew of three are grouped behind the protective screen and are just about to loose off a shell at an oncoming tank. *Below*—An anti-tank gun, camouflaged, at the edge of a small coppice

in trenches. The air of open combat is also evident in the final picture on the right of this page. The gun and crew are protected from observation to a certain extent by the trees and bushes and by the camouflage.

The following opinion of the value of the tank on the Western Front in 1917–18, from *The Birth of the German Republic* by Dr. Arthur Rosenberg, is interesting in connection with the threats of new weapons which come from Germany from time to time. In the Great War the Germans were unable to counter the British tank.

"The English technicians discovered a new weapon . . . the so-called tank or armoured car, which overcame all natural obstacles. If tanks had been used in large numbers, they must have broken every front . . .

"As early as October, 1916, the German Supreme Command requested the Ministry of War to design a German tank and to have it produced in quantity. For reasons which cannot be explained satisfactorily, neither German industry nor the technical branch of the army were able to carry out this demand . . . by 1918 only a few German tanks had been produced, and were not altogether satisfactory."

C

TANK v. TANK

And the Gun which may Immobilise the Once-Terrifying Novelty of the Great War

On this double page the artist has endeavoured to bring before your eyes two of th ways in which tanks will be fought and counter-fought. In the upper picture there a battle of tank against tank, which will surely be one of the most astounding metal upon metal that modern warfare has seen. We already know to some exten happen when tanks are thrown into the fray. We must remind ourselves that Italy have employed them very effectively against Abyssinia and China, but met no rea resistance. Large numbers of tanks were used by both sides in the Spanish Civi invariably the heavy Russians routed the lighter Germans and Italians in tank-to-ta But all three were frequently routed by Spanish soldiers armed only with primit throwers, sticks of gelignite, and tins of petrol. Often the light models became unc when attacking at speed. But just as often the heavy Russians became bogged, a ditches still testify to that great discomfiture. In the lower picture is indicated th the bullet and the shell, no mean threat nowadays

Drawn for THE SPHERE *by Frank Wootton*

Above—**BEHEMOTH MEETS BEHEMOTH**
A mighty clash of steel which may be witnessed in the present war

On right—**A COUPLE OF TANKS CHARGING DOWN A ROAD TOGETHER**

Below—**THE ANTI-TANK GUN FACING AN ONRUSH OF SNORTING TANKS**
Here Mr. Wootton has visualised for "Sphere" readers the confronting factors in tank warfare. The gun fires a projectile capable of piercing any tank

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FIGHTING THE TANKS: Smoke as an Invaluable Screen In War: Increasing Speed as an Asset of Attack

THE ASSET OF SPEED: ONE OF THE NEW BRITISH TANKS MAKES A RAPID TURN

Speed of advance would undoubtedly add to the power of a massed movement. The overpowering noise of the tanks' mechanisms, the dust and smoke from the guns, will produce an accumulative effect upon waiting infantry

SNORTING DEFIANCE AS IT ROLLS THROUGH A SMOKE SCREEN

A British tank of this size is a formidable thing to encounter. The anti-tank gunners will have to be very cool fellows to be able to watch the advance of these thundering forts towards their gun positions

ONE OF THE BRITISH "HEAVIES" DISCHARGES HER MAIN GUN FROM THE SHELTER OF A WOOD

This tank is bigger than any British weapon shown in our previous record of British tanks. This massive fellow has rear doors admitting to what is literally a travelling fort

INTO ITS BARRAGE OF SMOKE THE TANK ADVANCES

This handy weapon has been hiding itself behind a smoke screen. The turret flaps are open here; in actual combat all would be shut down

PLANNING TO DEFEAT THE TANK

The New Science Which Is Rapidly Being Developed To Halt This Newest Menace In the Field

AS the war progresses we are beginning to see how far tactics at sea and in the air, developed since the last war, are proving correct. Despite manœuvres and lengthy tests it takes actual experience to prove whether theories which seem flawless are, in fact, perfect when faced with the counter plans of an enemy.

For instance, anti-aircraft fire seems so far to have proved a successful defence, when allied with speedy fighters always ready to take to the air within a couple of minutes. To this a reply has been to send over a flight of low-flying aeroplanes in advance with the intention of machine-gunning and silencing the unprotected gunners, who in turn have now the most powerful and accurate quick-firing guns and machine-guns as an antidote to this. And so theory and practice intertwine and plan and counter plan develop.

So far there has been no chance to test the efficacy of tank warfare and anti-tank defence, both of which are a new science and sphere of activity, or can be regarded as such in view of the vast development in tanks since the last war, and taking into consideration that there were no such things as anti-tank guns and rifles in France and Belgium last time. The greatest enemies of tanks used to be pits, mud, and the field artillery, coupled with their own vulnerability and liability to breakdown.

As was shown in the special tank supplement in THE SPHERE recently, the manœuvrability, speed, armour plating, and attacking weapons of the modern tank have improved out of all recognition. But anti-tank gunners feel that given reasonably fair ground conditions they have got the tank beaten. I will try to show their reasons for this belief and explain the tactics planned, always with the proviso still in mind, as the expert with whom I discussed the question admitted, that there is very little practical experience to go upon.

In Spain the tanks used were mainly lightly-armoured Russian tanks. Hand grenades and gelignite were often sufficient to stop these. Even when bigger tanks were used, the side that had anti-tank guns invariably won the battle. That is point number one.

In Poland the Germans had a vast advantage in modern tanks and used them against troops unprepared to give correct defence, but even so when the Poles had time to prepare for tank advances, they frequently got the better of them. It was the combined use of tanks and aircraft against half-trained defenders and badly-planned defensive measures that made the tanks so powerful.

While the anti-tank guns belong officially to the gunners, in actual warfare the disposition is under the infantry commander. Clearly the gunnery officer and infantry officer must co-operate very closely, and it would be a foolish infantryman who refused to listen to the expert plans of the gunner, but it is the infantryman who has the last word.

The anti-tank gun fires 2-pounder shells at the rate of about fifteen to a minute, allowing for really accurate laying. It is worked by a crew of three, a non-commissioned officer and two men. Two other men act as ammunition carriers. They form a team who have worked together in training and remain together. The weight of the gun is around 1,600 lb., and while it can be hand-manœuvred it is towed usually into position behind a light lorry on which ammunition and crew are also carried.

Now the purpose of the gun, which has no range-finder, is to be fired always at point-blank range (which is anything up to 800 yards). The shell, which will penetrate any armour it has so far been called on to attempt, is non-explosive. Having penetrated the vulnerable spots of the tank, it causes havoc as it ricochets around inside.

The sloping front of the tank may cause the shell to deflect and cause no damage, because at point-blank range the trajectory of the shell is almost completely flat, and certainly never above the maximum height of the tank at the highest point in the trajectory.

How then to place the guns? How to obtain the enfilading position? The tactics are rather like those of driving sheep. First search the land for some natural tank barrier such as a deep cutting, a sunken road, a river, a canal, on which to base a front line. A minefield, which may be obvious to the tank commander, may be prepared so as to shepherd attacking tanks to some negotiable gap or crossing, like sheep into a gate. He has to make for that, whether he likes it or not. Barbed wire of the concertina type, which rolls like a spring round the tractors, can be used to assist.

OBSTACLES to the TANK

WOOD Engineers cutting down trees with a pneumatic saw driven by compressed air. Trunks and stumps are used as obstacles

STEEL Very strong girders up-ended in the ground, with from 3 ft. to 4 ft. protruding above the earth, form redoubtable obstacles to even the biggest tank

WIRE For certain of the lighter types of tank, wire is a formidable obstacle as it gets into mechanism and causes a rapid halt

CONCRETE A great wall of reinforced concrete teeth, against which most types of tank would be impotent

Modern warfare with tanks, large and small, has caused new defensive measures to be adopted to deal with these monsters. There are few tanks which could overcome all the obstacles enumerated above; because here are impediments for all the types now likely to be used in warfare on the Western Front

First then, guns will be placed to cover the minefield, or other obstacle, in case any stray tank attempts it and gets stuck, becoming an armoured pill-box which might do a lot of damage. Clearly, it must be silenced if necessary by the field guns 3,000 yards behind. But anti-tank guns should have it in their field of fire, or it should be covered by the anti-tank rifles of the infantry.

Then, in front of the main line, but behind the front line, and well to the sides, the anti-tank guns are posted. But not in direct line in front of a gap or gaps, because their large flash of fire would easily give away their position to following tanks, or gunners. Preferably then behind a hay-stack, or a clump of trees, which protects them from view but allows enfilade fire on either side or towards the rear.

The posts are arranged in depth, placed to cover each other and the whole field at the same time.

I must return for a moment again to the gun. It has a bullet-proof shelter. Its wheels have been taken off—a matter of seconds—and a tripod erected. The gunner, who fires with a pressure of his right foot, can swing the gun through 360 degs. as easily as if he were sitting in a revolving office chair. And the gun itself is so simple that a recruit can master it in a few days.

The non-commissioned officer judges the range and gives the orders. The layer adjusts his sights and fires. With what chance of hitting his moving target? It should be nearly 100 per cent. at that point-blank range.

The new recruit has a four months' course of training, in the first month of which he probably hardly sees the gun.

But in a short time he may be graded as a layer, most of them in the first class. To reach this standard in an actual test he has to hit a stationary tank twice out of two shots, a tank moving diagonally four times out of four shots, and a tank moving sideways also four times out of four shots. In other words, out of ten shots he has to hit the target ten times. And that is in the training stage—and most of them manage it. No wonder, therefore, the officer considers that with missing such a rare occurrence, the anti-tank gun has got the tank beaten.

Each shell fired is of the tracer variety and aim can be corrected as easily as with a rifle.

These are the anti-tank tactics: shepherd the enemy to places where he can cross, choose your positions with care, and then let him have it from protected positions on flank; and eventually the rear. If the advance is in great numbers, or the enemy return fire, despite the bumping, happens to be very accurate, well, a lot of damage will have been done first, anyhow.

I watched some of a new batch of recruits at work. "Grand men, these," said an officer of the last war. "Different from the last time. All classes of men here, working together, stockbrokers and miners, bank clerks and roadsweepers, and teaming together as though they had known each other all their lives. There is a very high level of intelligence."

He has to pick drivers from these new men, drivers who can not only drive by day, but in strange country in the pitch black of the night; drivers who can read a map intelligently and take the guns, without lights, to the exact position decided for them, leave them there, and return to the main line in safety. He finds them in the new army quite easily. What is more, the gun-crew and driver are trained in event of casualties to be absolutely interchangeable, like most things in this war, but as he said, the level of intelligence is high and so is adaptability.

Four months' training and the raw recruit is ready to fight and test the new science and tactics of anti-tank warfare.

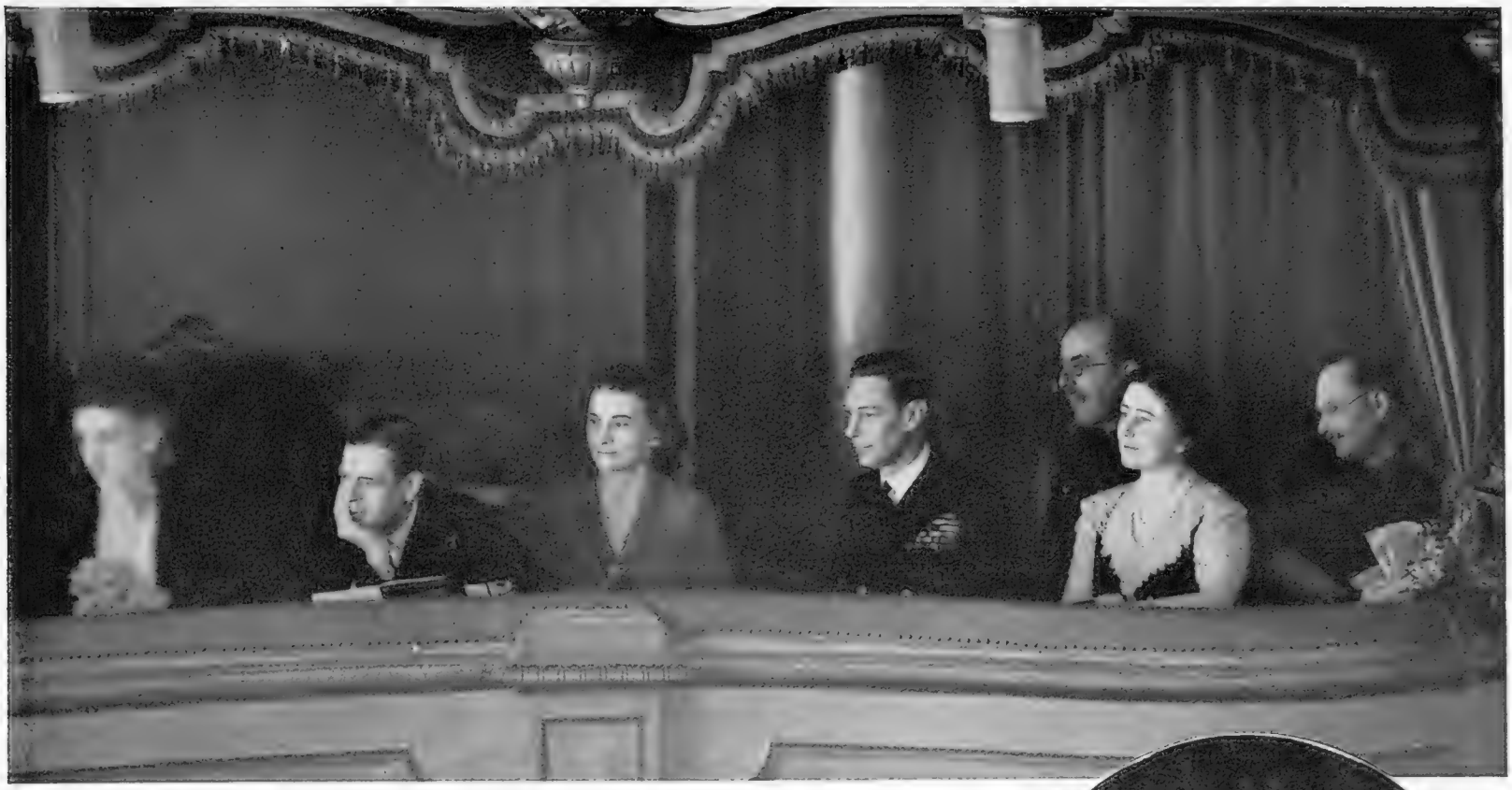
And it is a peculiar science, since it calls for men of high training, personal courage and initiative throughout. There are only three officers to a battery of anti-tank guns. It is the men and N.C.O.s who do the work.

They are placed in their secret positions and there they must remain. Hidden away, they cannot move during day-time unless in action. They have no means of communication, no telephone to these outposts. Food cannot be brought to them at any regular intervals, obviously. It may not even be possible to do so on some nights. The N.C.O. is on his own with his men.

I saw men from Devon and Cornwall, from Lancashire and the North, from London, doing their training, and itching to prove that "they have got the tank under control."

It remains to be seen what the tanks have to say about that.

Noel Thompson



THE ROYAL FAMILY HAVE AN EVENING AT THE THEATRE

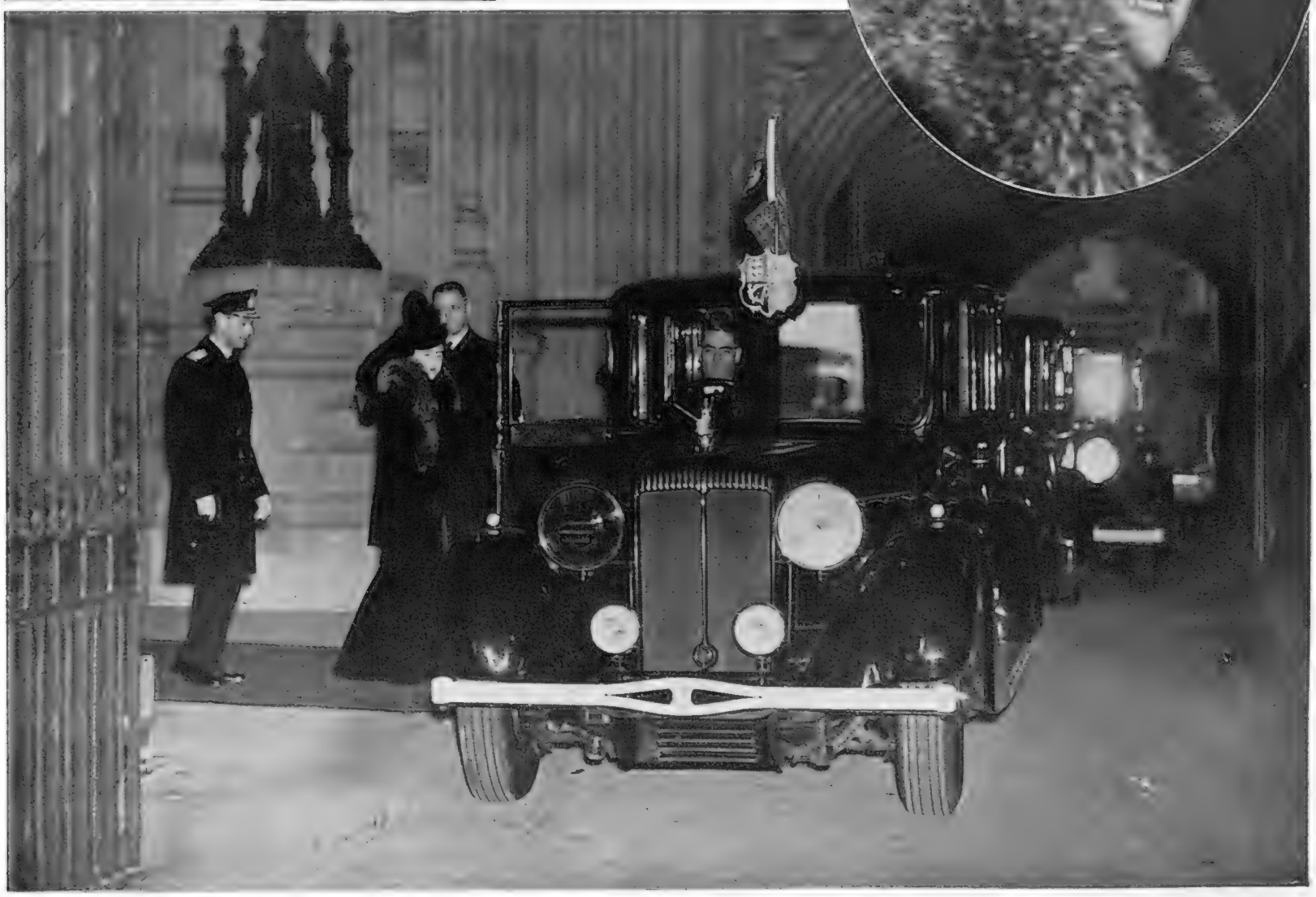
A picture taken during a performance of *Black Velvet* at the London Hippodrome, which the King and Queen attended a few evenings ago. From left to right—The Duchess of Kent, the Duke of Kent, the Duchess of Gloucester, the King and Queen, and the Duke of Gloucester (home on leave from France)

OUR CHARMING QUEEN

Some New and Unposed Pictures

On left—The Queen listening to music at the National Gallery; and at the Girl Guides' Association in Buckingham Palace Road

On right—The Queen arriving at the Houses of Parliament when she accompanied the King at the Opening



THE ROYAL OPENING OF PARLIAMENT

The King and Queen emerging from the Sovereign's entrance in the Victoria Tower after the King had performed the ceremony of Opening the New Session. This was a surprise visit on the King's part, as it had been anticipated that the King's Speech would be read by a Deputy

IN THE B.B.C.'S WAR-TIME HIDE-OUT "SOMEWHERE IN ENGLAND"

IN THE FOREIGN LANGUAGES STUDIO EVERYTHING IS VERY EFFICIENTLY ARRANGED

Here someone in England is reading a news bulletin in Polish

THE LIGHTER SIDE—PREPARING FOR A MID-WEEK MATINEE

THE OVERSEAS NEWS DEPARTMENT IS LINED WITH MAPS AND ARABIC INSCRIPTIONS

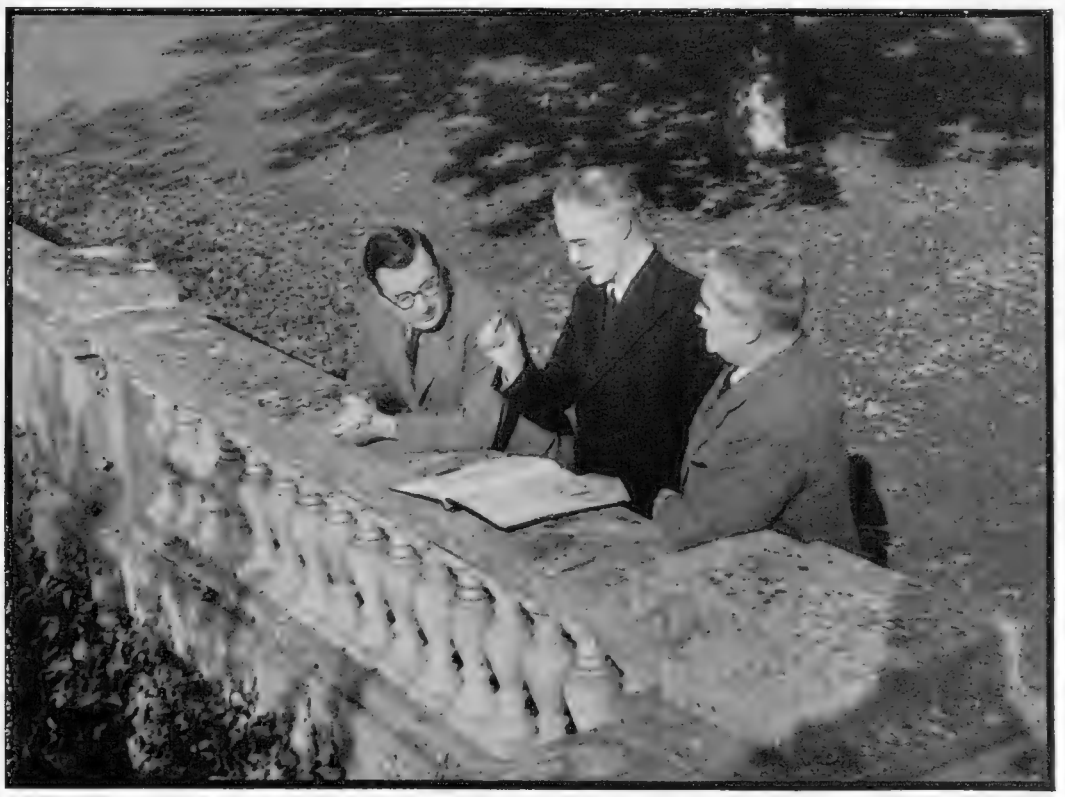
In the Arabic translation room the final touches are being put to the text of a talk in Arabic

VERY LIKE A SUB-EDITOR'S ROOM IN A DAILY NEWSPAPER OFFICE

The Empire news-room staff. It is in this room that the news bulletins in English for the short wave transmissions of the B.B.C.'s world service are compiled. The bulletins go out at frequent intervals through each twenty-four hours, and work goes on all round the clock

"This is the B.B.C. Home Service"

Charlie Shadwell is preparing to rehearse a number with his orchestra in the new B.B.C. quarters. Issy Bonn is seen marking the script with a pencil



A MORNING MUSIC CONFERENCE ON THE TERRACE Strolling out in the sunshine, they pause by the balustrade. Left to right are Mr. K. A. Wright, Assistant Director of Music, Dr. Thatcher, Deputy Director of Music, and Mr. Arthur Wynn, music bookings impresario

SIR ADRIAN BOULT, who is also seen *on the right, close up,* rehearses with his symphony orchestra in a large room over a local store

The B.B.C. has settled down to its normal routine in its war-time quarters in the country, far away from London. At the outbreak of hostilities hundreds of office workers, musicians and artistes had to be evacuated. Private houses were taken over for the office staff and billeting arrangements made to accommodate these city immigrants. Transferring the B.B.C. without interrupting the programmes was a colossal task. Many a broadcast takes place in an old converted parish hall with microphones slung overhead on festoons of wire. The stained-glass windows, framed in their Gothic arches, make a strange background. Local inhabitants are becoming quite blasé, for it is no longer a novelty to meet favourite broadcasting stars strolling in the lanes or forgathering in the local hostelry.

LOOKING INTO ONE OF THE STUDIOS A scene during the Children's Hour broadcast

Left—**FLORENCE DE JONG** at her organ, now in the old parish hall

YOU MAY LIKE THE B.B.C. PLAYS OR YOU MAY NOT —But here are the busy men who produce them under difficulties—Van Gielgud (right), director of features, discussing a new play with Howard Rose, drama producer

PARIS IS STILL THE CAPITAL OF FRANCE

A Comparison Between the Everyday Life of the Citizens of Paris and London

By HARRY J. GREENWALL

I BEGAN an exciting week when the air raid alarm siren woke me at 4.45 a.m. in the little cottage in the zone of the Armies where I passed the night. I was hardly awake when there was the drone of the engines of enemy planes overhead. A few minutes later, there was a dull sound as if Titans were beating hundreds of carpets. It was the DCA — the *Défense contre avions* — which we call anti-aircraft batteries.

In the afternoon, I motored to Paris and again enemy aeroplanes bent on dropping leaflets were trying to reach the capital. I could hear much plainer now the dull booming of the guns, but, strangely enough, once inside Paris there was not a sound, and people with whom I talked had not the faintest notion that an air raid was in progress. Actually, the guns continued to fire for nearly two hours, but Paris went about business with its customary war-time calm. Fewer and fewer people are carrying the grey biscuit-tin shaped gas-mask containers. Parisians have absolute faith in the defences the Government has prepared. There are far fewer outward signs of war in Paris than are to be met with in London.

Paris, no doubt for good reasons, has not indulged in a balloon barrage. That is, perhaps, the first and most striking difference between the two cities. Then sandbags; far fewer sandbags are to be met with in Paris. Even now, the work of protecting the public monuments with sandbags is not quite complete; Paris is in no hurry. Fortunately for Paris pedestrians, there are no sandbags on the pavements over which one may tumble with ease.

Sitting at a café terrace in the sunshine, I looked through my 1914 war diary to make a few comparisons between the Paris then and the Paris now. One striking difference is to be found more at night than in the day. The Paris sky of 1914 was stabbed by searchlight. Nowadays, there are no searchlights. Then, perhaps truly striking and much more important, Paris is now the capital of France, and not a provincial city as she was in 1914 when the French Government had removed itself to Bordeaux. I cannot remember whether any business was being done in Paris during the war days of 1914, but at the present time, business in Paris is indeed slack. The shopkeepers are clamouring for more light, but little do they know that they have far more light than their opposite numbers in London.

The Paris air raid wardens do not enforce the no-lighting restrictions with the same ardour as do those in London. Shop windows are well lit, long after dark; many windows remain but faintly covered. This despite the fact that the authorities have very recently imposed fines on delinquents, but so confident is the Parisian that he goes about his business decided that he is going to see matters through without having to see his optimism more clouded than he can possibly help.

There are, perhaps, just as many foolish rumours afloat as there were in the early days of the last war. On the other hand, I am quite certain that the public is kept better informed than it was in the last war. There is very little excuse for ignorance nowadays. The Paris newspapers are at present appearing with four pages as against the two pages with which they had to satisfy their readers during part of the last war. Nevertheless, Paris editors and newspaper proprietors are far from satisfied.

An official report has been drawn up and presented to the Financial Commission at the Chamber of Deputies. The report says that if present conditions continue, within six months half the Paris press will have to disappear. There is certainly a shortage of newsprint and also a great shortage of advertising, but fortunately, as somebody once said, nothing in France is ever as bad as it looks, and I am quite sure that the Paris press will see the war through.

The cost of living in Paris to-day compares well with the early days of 1914. I do not mean, of course, that the cost of living is anything like it was at the time the last war began, but I mean that there has not been anything like the sudden rise in the cost of living. Milk has increased in price, but this is more seasonal than war. Tobacco and cigarettes have both risen since the war began. Food is not rationed, and I understand that it is not likely to be rationed. Monday is nominally a meatless day, but nevertheless, many restaurants have meat on their menus. Tuesday is a beefless day, and it is certainly not possible, as far as I understand, to discover a beefsteak, or anything that comes from the ox. On the other hand, the bread is still as excellent as it always was; there is plenty of sugar and coffee. I happened to lunch in a middle-class restaurant near the Gare St. Lazare. A dozen very succulent Belon oysters cost 14 francs. The average price of a dish was around 1s.; a very excellent meal including half a bottle of very sound wine may still be eaten for the equivalent of about half-a-crown.

Sitting at the terrace of the Café of Peace, and watching the world go by, I remarked the absence of the horizon blue which was the colour of the French Army during the last war. Now the French Army is clad in khaki. Occasionally one catches a glimpse of the blue of the R.A.F., but Paris sees extremely little of the B.E.F.

The Street of Peace is extremely peaceful. Most of the shops are closed. Of course, the Street of Peace, or perhaps you will recognise it better if I refer to it as the Rue de la Paix, has long since lost a lot of its ancient glory; that began when Parisian shop life moved westwards to the Champs Elysées. Therefore it is not fair perhaps to attribute the closed shops in the Rue de la Paix to the war, but elsewhere all over Paris there are many closed shops, and each shop has approximately the same notice stuck on the shutters: "Closed because of mobilisation" or "The boss and the staff are mobilised."

In the Rue St. Roch I found a slight variation of this notice. A small hotel was closed and there was this rather quaint notice: "This hotel is closed because the boss finds himself mobilised."

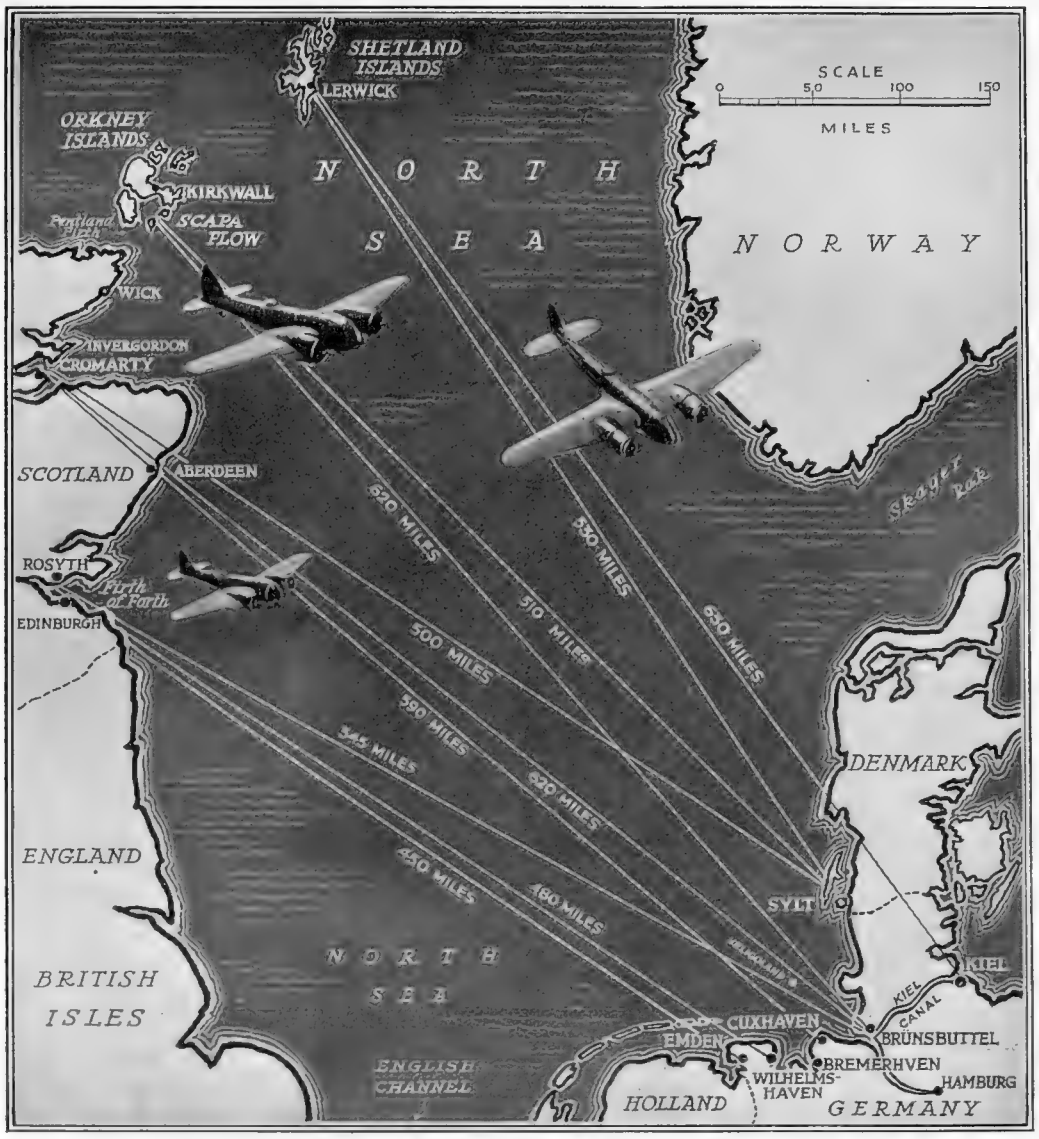
Politics are dead, as dead as the dodo. True, I found the lobby of the Chambre des Députés very animated. This lobby or "Hall of the Lost Footsteps," as it is so romantically named, is a sort of sounding board, but certainly Party politics are dead, and M. Daladier may congratulate himself on having managed to do what must have been the dream of every French statesman, namely to form a government which stands aloof from all Party politics and is able to fight towards victory. Naturally, there are plenty of Deputies who are pressing for Parliament to be summoned, and no doubt it will be summoned, as likely as not in the very near future, but apart from giving perhaps an exceptionally patriotic demonstration to the country, I don't think Parliament will do anything else before it resumes its leisure.

During the last war, and particularly, I should say, at the beginning of it, every German-speaking citizen was rounded up and put into a concentration camp. This time, it is surprising to hear German spoken in the streets and in some of the cafés in the very heart of Paris. This of course is due to the fact that there are so many German and Austrian refugees in Paris, but I think it is also a tribute to the humanity of the French people.

There is no singing of the "Marseillaise," as there was in the last war; there are no anti-enemy attacks of any nature, neither in the press nor in public. In fact, to sum up Paris as it is after the first three months of war, I would say that Paris bears a severe business-like mood. There is nothing frivolous, nothing feminine about Paris, and perhaps that is the most striking quality. Paris was once a woman's city; now most emphatically it has become masculine.

THE END OF AN ENEMY RAIDER IN FRANCE

British and French Air Forces on the Western Front, working in the closest co-operation, are carrying out magnificent work. This picture, taken a few days ago, shows the fuselage of a German bomber shot down in France being towed through the streets of a French town. This shattered hull, bereft of its wings and tailplane as it is, will nevertheless afford much valuable information to the experts of the Allied Air Forces



THE GERMAN AIR ATTACKS ON THE SHETLANDS AND OTHER EAST COAST POINTS AND WHAT SUCH FLIGHTS ENTAIL IN MILEAGE

There was a fierce burst of anti-aircraft fire when a German machine believed to be a Heinkel bomber visited the Shetlands on November 26. This Sunday call made the ninth air expedition of the Germans to the Shetlands, the lonely group of islands to the north-east of the Orkneys. To reach the Shetlands the enemy must fly 530 miles from Sylt or 630 from Kiel

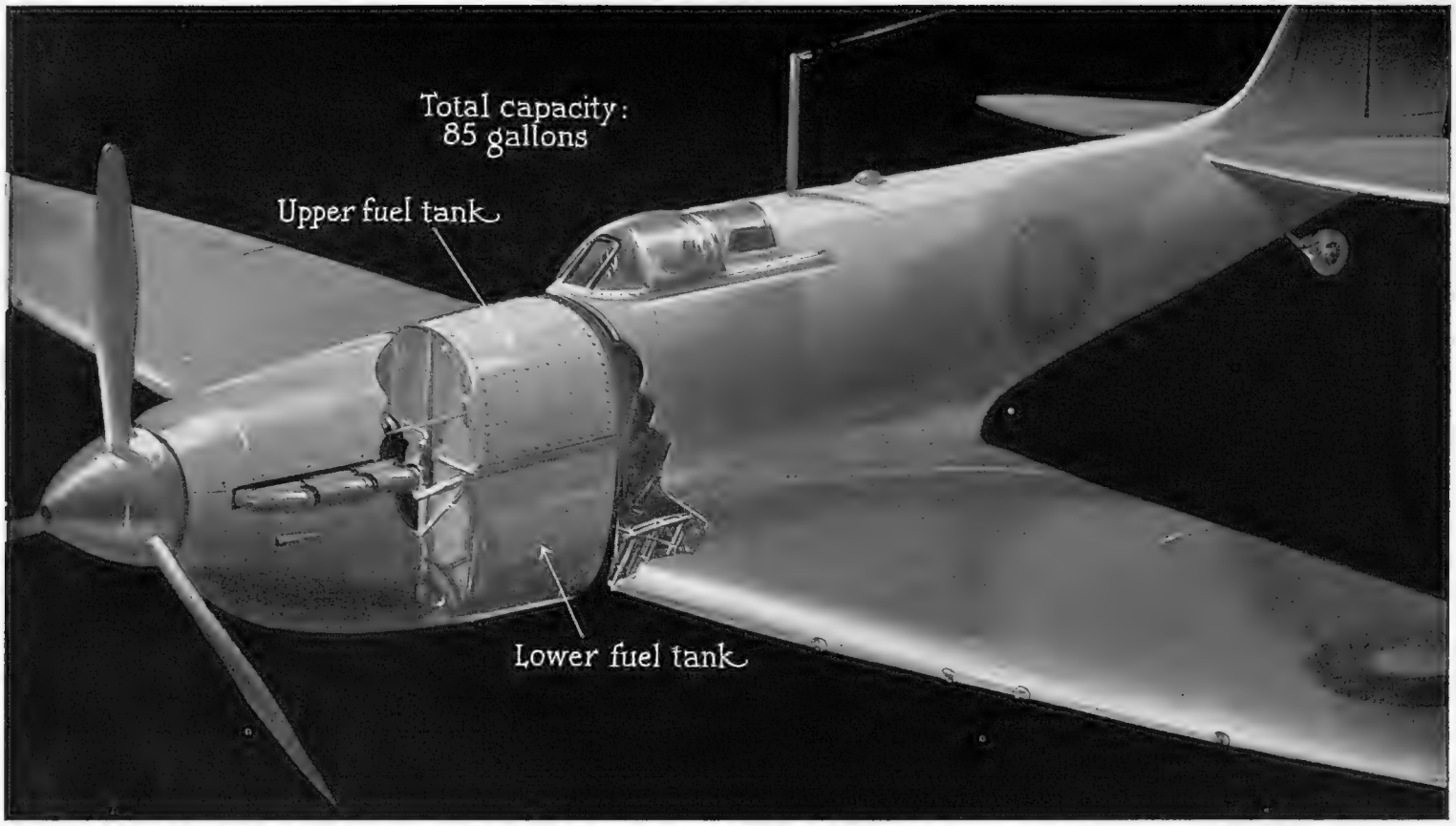
BACKDOOR TO THE BALTIC: THE STALIN CANAL

The struggle for the political and naval control of the Baltic is being watched with the keenest interest by the Allies and Europe in general. It has been pointed out that the German plans for sealing the Baltic which have been going forward actively are concerned not only with the corking of the bottle at the North Sea end but the prevention of the bottom falling out at the Russian end. The Nazis may compel Baltic shipping to halt for search at the Kiel Canal but they cannot set up Customs houses on the Stalin Canal, which links the Baltic with the White Sea. Nor can they even prevent the Scandinavian States from trading direct to the new Soviet protectorates of Lithuania, Latvia and Estonia. In case of any such attempt Russia is now engaged in turning Libau into a new Kronstadt, and behind the coastal defences the Red Army is settling itself down. *On right*—A special map showing where incidents connected with the hunt for the German pocket battleship *Deutschland* have occurred. A large proportion of Britain's cruiser strength is now engaged in the pursuit

FOUR AREAS IN THE NEWS

THE SCENE OF THE DUTCH FRONTIER OUTRAGE

A month ago—on November 9—an extraordinary *affaire* occurred on the Dutch frontier line, opposite the German town of Crefeld. Several roads and railways converge on Venloo, the Dutch town nearest to the actual frontier post concerned. The actual moves which occurred are difficult to ascertain, but the fact that a party of armed Germans kidnapped five persons and took them into Germany is vouched for by the Netherlands Government



THE BRITISH SUPERMARINE SPITFIRE (fastest single-seat fighter in the world) has a fuel capacity of 85 gallons, located in two tanks placed between the engine and the pilot as shown in this drawing

THIS PETROL BUSINESS

—In Relation to British and German Aircraft

IN August, 1914, our "contemptible little army" had no tanks and only five squadrons of aircraft—some ninety machines in all. I forget the number of squadrons with which we finished the war, but it was well over 200. Likewise it is impossible to say how many machines the Royal Air Force possesses at present. Estimates of 6,000 have been given by various writers, but only the Air Ministry know the correct figure, and they will not tell. But we shall certainly have over 10,000 machines when we finish the war; the French will have as many, and the Germans perhaps more.

In 1938 the total petrol consumption of the United Kingdom was 1,467,416,000 gallons. There are no official figures to show how much of this was consumed by aircraft, but an estimate of 30,000,000 gallons may be not far wide of the mark.

It is obvious to the layman that the heavy bomber with its load of death and destruction and a crew of four or more must consume more petrol than the small but agile single-seater fighter. On an average, the twin-engined bomber of any air force with a speed of something between 250 and 300 m.p.h. would use about 100 gallons of petrol for every hour flown at top speed. By throttling down to cruising speed the pilot can reduce consumption by about 33 per cent. at the cost of a slower trip.

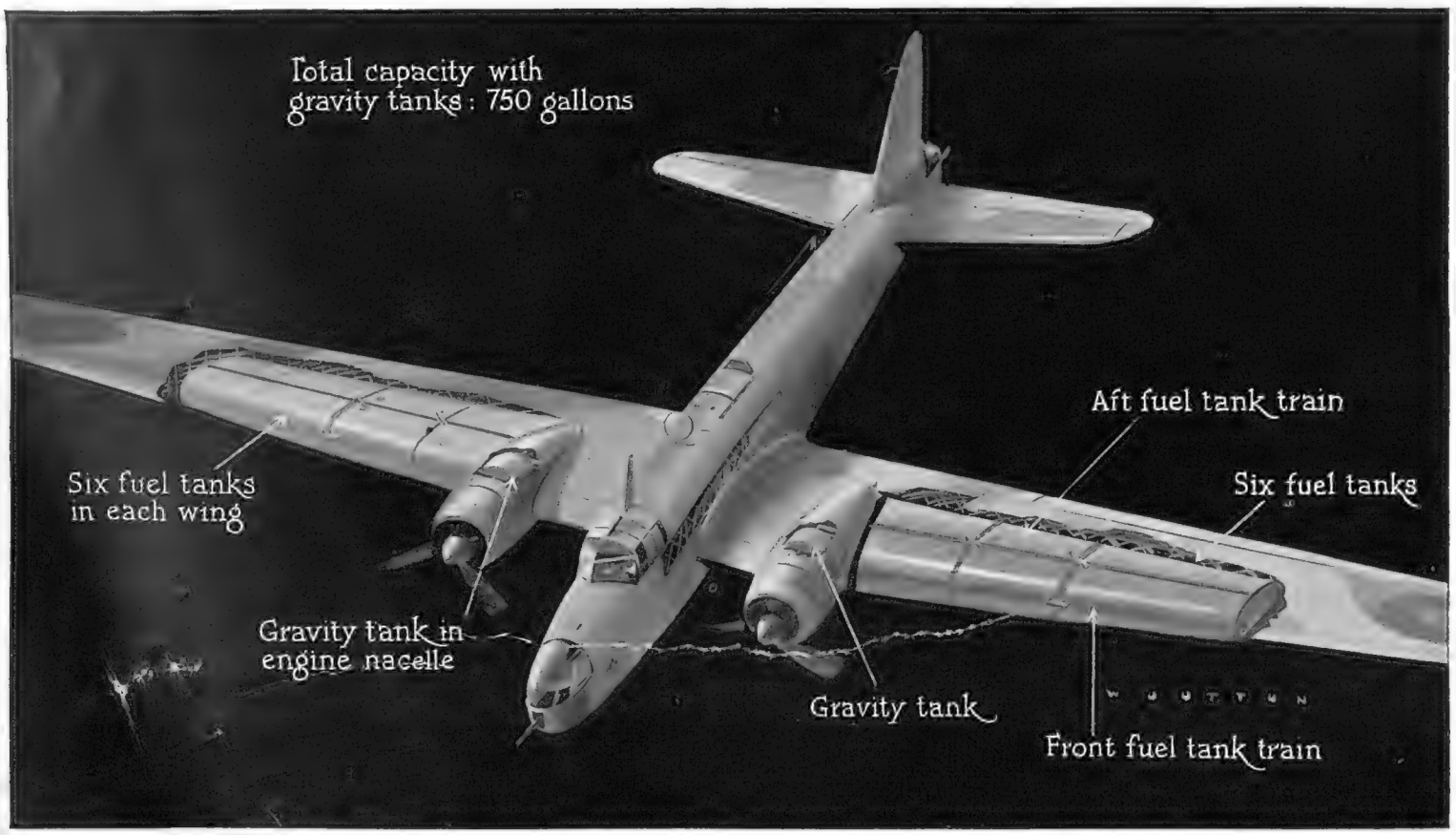
A British or German bombing formation raiding an objective in the enemy's country has a direct flight of at least two hours each way. But the raiders may have to make detours to avoid detection, and if intercepted by enemy fighters the pilots will open their throttles, and their petrol consumption will rise accordingly. In view of other contingencies which may arise, their time on the wing will probably be nearer six hours than four, and it would not be unreasonable to place the fuel consumption at 10,000 gallons for a raid by twenty machines.

The performance of the Supermarine Spitfire has not yet been released by the Air Ministry; our next best fighter is the Hawker Hurricane. If these machines are employed on defensive work at home (i.e., to take off to tackle enemy raiders when the alarm is given) they will not cost the nation much more in petrol than they do in peace-time, unless the number of German raids is increased considerably. But out on the Western Front there is a different story to tell.

Fighter formations will be on patrol all day there. This will involve many fights with their Messerschmitt opposite numbers. We do not know how many fighter squadrons are now in France, but if we assume the moderate figure of 500 machines, each using 100 gallons of petrol a day (another moderate estimate), we should have to pay for 17,250,000 gallons of petrol a year.

Then there are the reconnaissance machines which make maps of Germany and help our navy to patrol the seas. There are light bombers, machines for divers forms of military and naval co-operation, and finally we must not forget the aircraft required for training the pilots we need for replacements and for the automatic expansion of our air force with every month of war.

Mr. W. B. Courtney, the aeronautical editor of *Collier's Magazine*, asserts that the United States gives her pilots an average of 265 hours flying a year. Our own Air Ministry has published no statistics, but the French do not consider a pilot sufficiently trained under 300 hours. This period might be speeded up in war-time, but even so it is impossible to calculate the millions of gallons of petrol which will be needed to train the thousands of extra pilots. Sixty per cent. of the world's petrol supplies come from the United States. These are accessible to us, but not to Germany, who is known to be short of petrol. 12,000,000 gallons of this precious fuel have been intercepted by our navy since the beginning of hostilities.



THE BRITISH VICKERS-WELLINGTON BOMBER has a maximum range of 3,200 miles at a cruising speed of 180 m.p.h. (this is not its maximum speed, of course). All possible objectives can be reached from British bases up and down the world with the "Wellington" without refuelling

AIR CANNON versus MULTI MACHINE-GUNS

—And Some Notes On the Mining of the Seas by Aircraft

The War in the Air Described by CHARLES G. GREY

(formerly Editor of *The Aeroplane*)

PARACHUTING mines into the shipping lanes from German aeroplanes seems to have caused, rightly, more interest and apprehension than any other air activities of the past few weeks. Therefore, the raid by long-range fighters of the Royal Air Force on November 28 or thereabouts was an event of considerable importance.

I wonder how many of my readers have read that extraordinary book, *The Riddle of the Sands*, which was published in about 1912 or 1913. It was written by one Erskine Childers, a keen amateur yachtsman, who used to spend much of his time cruising around between the Frisian Islands and the German mainland. He had a fixed idea that when the inevitable war between Germany and England broke out the Germans would launch a fleet of transport barges towed by steamboats from behind those islands and would land troops on the East Coast of England. The book describes, as a story, the preparations for such a raid and how it was defeated.

On the outbreak of war in August, 1914, Childers joined the Royal Naval Air Service, and as a recognition of his work in spying out the land he was given a seat in one of the seaplanes which made the raid on Wilhelmshaven and Cuxhaven on Christmas Day, 1914. Afterwards he served in the seaplane-carrier *Ben-my-Chree*, under Squadron-Commander L'Estrange Malone in the eastern Mediterranean and did very good work. After the war Malone became Communist M.P. for Northampton, and poor Erskine Childers turned Sinn Feiner and was shot in Ireland as a rebel. A great tragedy, because he was the first man to awaken British official people to the importance of those Frisian Islands.

Since Germany started to build up an air force, seaplane stations have been established at Borkum, Nordeney, and, I believe, Wangeroog. Those stations may be nice and handy for the taking-off of seaplanes laden with mines, but they also happen to be within the shortest bombing distance from us of any point in Germany.

The idea of sending our long-range fighters to attack the flying-boats in their own nests seems sound. Probably the Germans now know better than anybody in this country outside the R.A.F. whether we used what are commonly called air cannons on this occasion. But whether or no, that was essentially a job for the air cannon. A couple of 23-millimetre shells in the hull of a flying-boat on the water would not leave much flying-boat worth repairing.

One of the leading exponents of the air cannon school is the Infante Don Alfonso of Spain, cousin of King Alfonso, who was for some years attached to the R.A.F. in England, and at the end of the civil war in Spain commanded one of the two active service brigades in the Nationalist army. He had several squadrons of Savoia-Marchetti bombers, each of which used to carry two of these air cannons. Incidentally, although he was just over 50 years of age he had during the Spanish civil war made about 200 flights as a pilot over the enemy lines. He told me, when he was showing me over one of his bomber squadrons, that he was convinced that the air cannon was not only about the most useful weapon against motor transport on the roads and trains on the railways, but that it was quite powerful enough to sink ordinary merchant shipping, other than the really big ships.

For years there has been argument in the air forces of the world between the advocates of the multi-machine-gun fighter and the air-cannon fighter. The machine-gun people argue that with eight machine-guns firing at the rate of 800 rounds per minute or more, one can practically saw an enemy machine in pieces, if one can get close enough to it. The cannon people argue that the machine-gun people can saw away as much as they like because with a cannon you can shoot at them while still out of their range.

Probably in a fight between a single-seat fighter with eight guns and a single-seat fighter with one cannon the eight-gun fighter would win, given equal manœuvrability and equally good piloting. But against a big target such as a flying-boat on the water, or a four-motor bomber in the air, the cannon ought to score every time against the multi-machine-gun armament.

WRECKED BY R.A.F. FIGHTERS

All that was left of a German Dornier plane after it had been engaged by R.A.F. fighters over France and shot down a few days ago. The machine pancaked into a ploughed field but did not catch fire. Some idea of the tremendous onslaught it was subjected to is evidenced by the bullet-riddled fuselage and the fact that the metal covering the rudders and tail fins has been practically all shot away

This whole question of mutual blockade of the North Sea, by minefields and counter-minefields, and parachuted floating magnetic mines, does introduce a factor into the war which either did not exist or did not attain to such magnitude in the last war.

Lots of ships and trawlers, and particularly minesweepers, were blown up by mines, both German and British, which broke loose in periodic gales and were a danger to shipping.

Our big flying-boat patrols from Felixstowe and Yarmouth and Immingham were a considerable help in spotting floating mines and reporting them to the sweepers.

The position to-day is not the same. In that war the blockade of Germany did definitely mean the starvation of Germany. Beyond capturing Serbian pigs and Rumanian oil and Polish wheat and potatoes the Germans got little out of their victories on the Eastern Front and lost quite a lot of men and material.

This time, although presumably the Germans must maintain frontier garrisons and frontier air patrols they can trade without hindrance with Russia and the Balkan States and Hungary. As a serious writer in *The Times* on the economic position put it—Ruritanian pigs will be made into *wurst* and Ruritanian maidens will be strumming on German pianos.

My friends who know of these things tell me that the supplies of mineral raw material for aircraft production from Russia to Germany may give a lot of trouble because the Russian refineries and foundries are so bad. But the Germans will get the material all right and will refine it themselves. They also tell me that Russian oil is of poor quality. But that again will not trouble the German refineries. And in return Germany can export manufactured goods, which was impossible in 1914–18. So the clearing of the North Sea of mines, so that neutral shipping and our own shipping can proceed, for our own sake, without undue danger, is a task of the greatest immediate importance to us, whereas a dead sea does not affect Germany.

The obvious way of setting about it is with really big shooting-up raids and bombing raids on German seaplane stations. The fact that the R.A.F. have attacked the Borkum station seems to indicate that some of our North Sea air patrols have seen the dropping of mines by parachute and have spotted the type of machines used for the job.

A mine of 440 lb., which is much the same thing as a 500-lb. bomb, but of a less pleasing aerodynamic shape, hardly seems a convenient load to sling under the wings of a flying-boat, so, as nothing official has been published on the subject at the time of writing, I rather think that the Germans are probably using the Blöhm and Voss three or four-motor monoplane float-plane for the job. It stands high on its floats so that there is a completely clear space between which would give unobstructed passage for the mines, and as the machines were originally built for, and tried out on the north Atlantic passage, they have fine big roomy cabins, such as air liners should have, in which there would be plenty of room for mines. And as they would only be used for short distances out over the North Sea and back, the German machines would be able to carry a very big load of mines. Probably the Heinkel 115, a two-motor, twin-float torpedo carrier, is used also.

There is no particular reason why the Germans should use seaplanes for mine-laying. They might just as well use land machines, but for the fact that a mine would not be quite such a handy thing to stow in a bomb rack as a properly streamlined bomb. Consequently, if we do manage to clear out all the seaplane stations on the Frisian and Jutland coasts the Germans could still go on sowing mines of the same sort from big bombers which would start from aerodromes much farther inland. Which looks as if in the end we shall have to proceed from the reciprocal bombing of seaplane stations—you may remember that the Germans claimed to have destroyed some of our flying-boats on the water in the Shetlands. Then we may have to start bombing one another's aerodromes. And after that the logical sequence is towards bombing munition centres, which means bombing the civil population who live round the armament factories.

If we are going to raid those seaplane stations, then the raiding ought to be done by mass formations and not by half a dozen or a dozen or even five dozen aeroplanes at a time. So long as there are more anti-aircraft guns and interceptors than there are bombers, the bombers will never get through. But when the bombers begin to exceed the defence then real damage can be done, then the attention of the defenders is diffused and distracted—and success depends on concentration.

I fear that our poor friends the Finns are "for it." They are a fine lot. The upper class Swedes, and the peasantry Ugrians (kind of Hungarian, trending towards Lapps, up north). They have hated the Muscovite Russians for centuries, and the horrors of Bolshevism, so much worse than Tsarism, which they have seen across their borders, make death seem preferable to Bolshevik misrule. A dear friend of mine in the Finnish Air Force wrote only a few weeks ago—"We will fight to the end. But if each of us were a Ball or a McCudden or a Guynemer we could not resist the mere numbers of the Bolsheviks." And that is one of the tragedies of war, where weight so often prevails over right.

The Finnish Air Force, a grand crowd, commanded by General Lindqvist, the world's tallest air general—about 7 ft. high—have been chiefly equipped with British aeroplanes. They wanted Spitfire fighters, but could not get them after war was declared in September, so they are buying Italian fighters, which will have to go across Germany, either by train or in short hops by air, and then up the Baltic by boat. A serious political position in view of Germany's agreements with Russia.

CANdid comments by Miss CAN

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The World of Books—By Vernon Fane

SOMERSET COUNTRY HOUSE

A Rural Setting for Miss Naomi Royde-Smith's New Book

QUIETEST book of the week, and beating Mrs. Angela Thirkell's by a short head in that direction, is Miss Naomi Royde-Smith's **URCHIN MOOR** (Macmillan. 8s. 6d.). It is one of those stories generally, I notice, written by women, in which the principal character is a beautiful and very old house. The house in this case is in Somerset, near the Bristol Channel, and has been the home of the Cardwell family for several hundred years.

To this place one day shortly after the end of the last war comes a shy, kindly girl whose first chance visit leads to her marriage with the master of the house, one Cyriac Cardwell. By an earlier marriage "Ryack" Cardwell has one son, a baby at the story's opening, and it is with the growing affection between this child and his stepmother that the story is concerned.

At times I was irresistibly reminded of that *New Yorker* drawing in which an amateur dramatic society, on being handed their parts for a new production, are told that the action of the play centres on the neurotic nephew. The baleful looks on the faces of these genteel players, and the expression of delighted smugness on the face of the "nephew" had to be seen to be believed. In Miss Royde-Smith's book rather the same thing happens.

The author writes, as always, with graciousness and an appreciation of the subtler points of feminine psychology. There is nothing jarring, just as there is nothing illuminating about her new book, which provides us with a worthy addition to the fictitious "Stately Homes of England."

Mrs. Angela Thirkell's novel is an equally pleasant affair, though with a more frivolous tone, and with one or two decorous outbursts of high spirits to enliven it. As always, Mrs. Thirkell chooses the background of a country house in summer for her light-hearted little story, and this one follows its predecessors so closely that we even catch glimpses of Lord Pomfret and Lord Stoke, and learn the fortunes of a pretty girl who marries into a distinguished family.

The villains are as noticeably absent and the middle-aged women as charmingly dreamy as ever; very young men display the tact of eighteenth-century courtiers, and sherry is constantly served. In other words, the mixture as before, and a very mild, rather sweet mixture it is. But I think that next time Mrs. Thirkell will have to change the venue more than the present two fields away.

BEFORE LUNCH (Hamish Hamilton. 7s. 6d.) is not so exact a reproduction of earlier works that its plot does not bear a little examination. The central character is, I suppose, that voluble gentleman Mr. Middleton, a brilliant architect whose spate of talk would make most homes an inferno. That his escapes this category is due to the equable temper and infinite patience of his wife, and to the benign characters of his neighbours and servants.

During the summer in question Mr. Middleton, who has a heart of gold, lends a house on his land to his sister and her stepchildren; one, the attractive girl previously mentioned, one, a gifted but delicate boy with a talent for music. By the end of the summer the girl is engaged to the local eligible, the boy has found backing for the ballet he is composing, their stepmother is about to marry the architect's rich partner, and a local beauty spot, Pooker's Piece, has been saved for the nation. Hardly a crumpled roseleaf but the hopeless love of the architect's wife for the young composer, and even this is less poignant than the author might have made it.

For Mrs. Thirkell, I am perfectly convinced, is capable of far greater irony than she allows herself in these winning little books of hers, and some day she will let it break brilliantly through the calm surface of her narratives.

THE LOCAL (Cassell. 7s. 6d.) is a thin volume of lithographs by Mr. Edward Ardizzone and text by Mr. Maurice Gorham dealing with one of the most unassailable of English institutions—the pub. The illustrations are both witty and colourful, and the text elucidates such grave problems as the correct usage of the Jug-and-Bottle and the status of the tin-whistle player as compared with his more opulent colleague, the gentleman with the accordion.

Even teetotallers might appreciate the pathos of such a passage as this: "Peaceful and inoffensive (for the most part) the regulars would seem to have no enemies. But they are in danger, many of them. They are the chief victims of the rebuilding craze. When a nice old-fashioned pub is pulled down . . . it is the regulars who suffer . . . the more regular they have been the harder it is for them to go elsewhere. It is a sad ending to a modest and not altogether useless life."

Captain T. H. Bird is one of our great contemporary authorities on horses and on racing, and his new book, **ADMIRAL ROUS AND THE ENGLISH TURF** (Collins. 10s. 6d.), consequently has a double interest, as a biography and as an exposition of the author's own views. Admiral Rous, needless to say to any enthusiast, was one of the grand old men of English racing, and till his death at the age of eighty-odd, one of the most influential stewards of the Jockey Club. He instituted many reforms, and the Rous Stakes are yearly run in his memory at Newmarket.

He was the contemporary of such giants as the Lord Egremont who won the Derby five times, and Lord George Bentinck who spent £300,000 a year on racing. As for Rous himself, his habits were more modest and, in the writer's words, "it has to be said that Rous may not have been a supremely good judge of a horse, considered as a quadruped." But his heart, and, for the last forty years of his life all his interest, was in racing, and he was to become the prototype of the English owner, backer, steward, and all-round racing man.

ROYAL CAVALCADE (Stanley Paul. 16s.), which opens with Queen Victoria's coronation and closes with the death of the Dowager Empress Marie Feodorovna in 1928, is in effect the story of three queens—Victoria, Alexandra, and her sister, the Tsarina. It is a full, well-documented book, nearly 500 pages long, but its chief interest is in the new stories which it contains about the royalties of twenty or thirty years ago, and in the unpublished letters of the Tsar to his wife.

Forty-five years ago the young Tsar wrote in his diary: "This is the most splendid, unforgettable day of my life." It was the day on which he became engaged to his wife, the Empress, who was to have such a powerful influence over the rest of his life, and whose championing of Rasputin was to lead to such fatal results. The Tsar's correspondence with his wife throughout the crises of his reign is extraordinary, and it is often too easy to read between the lines and to see in his simplicity and in her ambition the seeds of a tragedy which the Revolution precipitated.

There are charming anecdotes of Queen Alexandra as a child and some unexpectedly funny ones about the Imperial Russian Court. The author, Miss Erica Beal, has collected an immense amount of material, and she is generous with it.

Mr. C. S. Forester's three books of the adventures of Captain Hornblower have been published in a single volume which is surprisingly compact and easy to handle. For those to whom the gallant captain's exploits are fresh ground, I can heartily recommend **CAPTAIN HORNBLOWER, R.N.** (Michael Joseph. 8s. 6d.)

He is a hero who, at first acquaintance, seems of less than heroic stature. Physically, he is neither handsome nor ugly, with a pair of "melancholy brown eyes . . . and tousled brown hair just beginning to recede and leave the forehead a little higher still." He is a taciturn man, successfully curbing what seems to him a natural volubility. And he is a first-class sailor, navigator and fighter. On those merits the adventures are founded, and whether in the Spanish Main, or off the coast of Catalonia, Captain Hornblower fights—and lives to fight another day.

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THE LEADING LIGHTS

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THE PROBLEM OF THE ROAD ISLANDS

Haphazard Lighting of These has Caused Many Accidents

By A. PERCY BRADLEY, M.I.A.E., A.M.I.Mech.E. (*Clerk of the Course, Brooklands*)

NUMBERS of people have been killed and many motor cars wrecked on the thousands of islands placed in the middle of our thoroughfares for the safety of pedestrians. In some districts the pillars and the lamp-posts on the islands have been mowed down so frequently that the authorities have removed the islands completely. So far as motorists who drive at night are concerned, the removal of these obstructions contributes towards easier and safer driving, but, presumably, these islands, which obviously cost a considerable amount of money to construct, served some useful purpose. Undoubtedly they were a haven of refuge for the pedestrian. Now in many places he has been robbed of that half-way halt across the street, and, although the diminution in the volume of traffic owing to war-time restrictions makes it easier for him to effect a safe crossing, an island, even in the present conditions, makes the journey less risky.

On many occasions I have mentioned in these notes that the reason why these islands are constantly being demolished by cars during the hours of the black-out is the haphazard way in which they are lighted. On the Guildford by-pass, for instance, the presence of some is indicated by the familiar blue light which illuminates the words "keep left." Then one of a row will have a pinkish light for some unearthly reason, others on the same stretch of road are only discernible by an ordinary red paraffin storm lamp. Obviously, a motorist is placed in an unenviable position when he has to decide quickly whether the red light ahead is an island, which he must keep on the right, or the tail-lamp of a car or bicycle, which he must pass on his left.

The authorities are reported to be very concerned over the appalling casualty list which results from black-out motoring. There are many things which they could do which would make the roads safer, but without waiting to solve every detail of the problem they could ensure a safer condition straight away if they were to decree that islands must be lit in some distinctive manner so that the lights on them could not be mistaken for anything else.

Another way in which they could save many lives would be to instruct the police to pull up motorists who are not complying with the existing lighting regulations.

Without exaggeration I should say that 50 per cent. of the cars on our roads during the period of the black-out are carrying lamps which do not comply with the regulations. I see red, blue and even green front side lamps, and the other night, whilst returning home, I was unable to overtake a large car which was evidently being driven by a very nervous driver or one who had never been on that particular stretch of road before. Whenever this driver saw another light, or even a slight curve ahead, he applied his brakes which immediately lit up a terrifically bright stop light. This dazzled me so much that I pulled up beside the road and let the offending car cover a mile or two before I resumed my journey. We have a large army of mobile policemen and in the present circumstances I cannot think of any more useful job that they could perform than to keep on the road during the hours of darkness and pull up these erring motorists who are a distinct danger to other road users.

It is very gratifying to learn that the export trade of many of our motor manufacturers is actually increasing at the present time. For instance, Morris Industries Exports Ltd., report an increase of 76·45 per cent. on orders for Morris cars from India and Burma over a period of forty-one weeks of the current season, as compared with the same period last year.

I also hear that during the first two months of the war the export of Daimler and Lanchester cars and commercial vehicles rose by 20 per cent. as compared with the corresponding period in 1938. The Government are anxious, and rightly so, to see the country's export trade maintained as far as possible, and so these instances which I have quoted must be a source of gratification to them.

Holders of provisional licences wishing to take the driving test are reminded by the R.A.C. that application for the holding of the test can now be made as the tests will recommence on January 1. Forms of application are obtainable from the licensing authority responsible for issuing the provisional licence and when completed must be forwarded to the appropriate Regional Officer of the Ministry of Transport, whose address will be found on the back of the form. The R.A.C. and the A.A. have suggested to the authorities that holders of provisional licences should be granted an additional gallon of petrol for the purpose of carrying out the test.

THE SHAFTESBURY HOMES AND "ARETHUSA" TRAINING SHIP

Readers of THE SPHERE are requested to make collection amongst their friends to enable th above Society to give the 1,165 poor boys and girl under its care as good a Christmas as possible under t present circumstances. This Society urgently nee funds to help meet the A.R.P. expenses at its vario Homes, and also to help them carry on their gre "National Service" of constantly maintaining ar training poor boys and girls for a 100 per cent. chan in life. All donations will be gratefully acknowledg from the Headquarters at 164, Shaftesbury Aven London, W.C.2.

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Post 2d. extra.

Three pairs in fancy gift box, 14/-, *post free*

H.12. **"Draycote."** 4-thread, 45-gauge. A luxury Stocking that will make a perfect gift. Fully fashioned pure silk hose, made from the finest high-twist yarns, giving a clear, dull appearance on the leg. The colours include honey, sunsan, crab-apple, pagan, mist, beige, etc. Sizes 8½ to 10½. Pair **5/11**

Post 2d. extra.

Three pairs in fancy box, 17/-, *post free.*

H.14. **"Essanee No. 1."** 54-gauge sheer Hose, fully fashioned. Pure silk from top to toe, with all wearing parts reinforced lisle. Although fine in texture, this stocking will wear well. Colours include crab-apple, sunsan, pagan, mist, beige, etc. Sizes 8½ to 10½. Pair **6/11**

Post 2d. extra

Three pairs in fancy box, 20/-, *post free.*

Stockings—Ground Floor

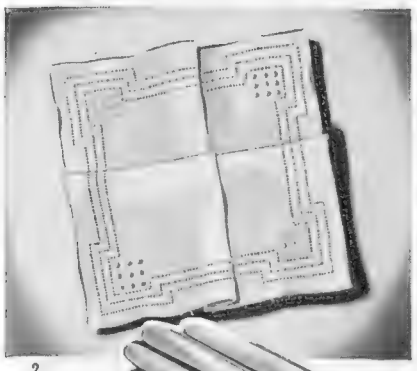
Visit the Gift Shop—First Floor

Swan & Edgar

Piccadilly Circus, W.1

Gifts—

A FEW SUGGESTIONS FROM DEBENHAM & FREEBODY



1.
Debenham & Freebody's "Clipper Case," holds hats, garments and three pairs of shoes; divisions in shoe compartment can be fastened back to allow space for other purposes. Front aperture will hold Compact or Zip Dressing Case.

Size closed 18 × 16 × 10½ ins.

Brown or navy leather cloth £3 8 6
Brown or navy vulcanised fibre - - - - £4 11 6
Rawhide - - - - £6 5 0

2.
White Irish Linen Handkerchief with Chinese Hand embroidery.
1/10 each 21/6 dozen

3.
Washable doeskin Gloves with wing cuff and elastic wrists. In light beaver, cedar, sand and light grey - 10/9

4.
Ostrich top opening Bag with divided inner pocket. Size 8½ × 7 ins. In blue, black and brown. 49/6

5.
Slender-fitting three-thread pure silk Stockings, distinctive appearance 8/11
Three pairs for 26/-

7.
Toilet Cologne in wooden container with various hand-painted designs.
6/6

Post Orders receive prompt and careful attention.

6.
Bath Crystals in bundles of assorted colours, in fancy box. 12 in box.
3/-

Catalogue of Christmas Gifts sent on request.

Debenham & Freebody

WIGMORE STREET, LONDON, W.1

LANgham 4444 *(Debenhams Ltd.)*

Send him BOOTH'S DRY GIN this Christmas

BY APPOINTMENT TO THE LATE KING GEORGE V

QUALITY *achieved by* **MATURITY**

Definitely Superior!

PRICE 13/6 PER BOTTLE
½ bottle . . 7/-
¼ bottle . . 3/9

Prices shown do not apply in Eire

THE ONLY GIN THAT HOLDS THE BLUE SEAL OF THE INSTITUTE OF HYGIENE

FOR YOUR CHARITABLE CONSIDERATION: Some Organisations Worthy of Your Help this Christmas

THE SHAFTESBURY HOMES AND "ARETHUSA" TRAINING SHIP

This well-known Society was founded as long ago as 1843 and constantly maintains and trains 1,165 poor boys and girls and gives them a 100 per cent. chance in life. In the Training Ship *Arethusa* poor boys of good character are trained for a life at sea and will enter the Royal Navy or Merchant Navy. Such is the quality of the training which they receive that during the Great War, in the attack on Zeebrugge, one old *Arethusa* boy was awarded the V.C., while seven others were awarded the D.S.M. In the Society's various Homes boys are trained for civil employment, and the fact that employers continually ask for boys from the Homes, speaks well of the training they receive. The girls under the Society's care are trained for domestic service, so that should they take up work other than domestic, they have an insight into those qualities that go to make home life happy. Needless to say, this great National work needs your continued support. During the past few months donations have been falling off, but the expenses have been increased by A.R.P. at the Homes. Legacies are most earnestly solicited. All donations will be gratefully acknowledged from the Headquarters at 164, Shaftesbury Avenue, London, W.C. 2.

WAIFS AND STRAYS

Though our thoughts go out to the men on active service this Christmas, we must not forget the calls of the home front and the children. Some 5,000 empty stockings must, for instance, be filled by Father Christmas for the Waifs and Strays Society—a task in which your help is needed! Send your gift to the Secretary, Waifs and Strays Society, Old Town Hall, Kennington, S.E.11. This famous society has over 100 homes in safe and neutral areas in different parts of the country and many boys and girls are boarded out, for more than 1,000 children were evacuated on the outbreak of war.

THE CHURCH ARMY

The spirit of Christmas will remain despite the war, and there will be celebrations, though not in every home. The Church Army is planning to carry the spirit of Christmas into the homes of lonely old people and gentlewomen in distress and into the homes of the very poor as well. It may not be possible to distribute Christmas parcels on quite the same wholesale scale as before, but the Church Army is determined to do all it can. Our soldiers, sailors, and airmen claim a large share of our attention to-day. There are recreation huts, canteens, and other centres to be maintained and new ones to be erected and opened. The Christmas spirit must not be lacking in our efforts for the brave men who are defending our land. We cannot carry on any of this work without your help. Will you then, in the spirit of Christmas, give something to help? Cheques, etc., should be crossed "Barclays, a/c Church Army," and made payable to Preb. Carlile, C.H., D.D., Church Army, 55, Bryanston Street, W.1.

DR. BARNARDO'S HOMES

The necessity created by the war of evacuating such children of Dr. Barnardo's Homes as were in danger areas to places of safety has meant that this year at Christmas such well-known communities as the Girls' Village Home, the Boys' Garden City, and other centres considered by our Government as vulnerable spots will not ring with the peal of happy children's laughter. Instead, a great number of smaller homes in the country will be the scenes of festivities—with a consequent greater-than-ever pull upon the purse strings of Dr. Barnardo's Homes, already overburdened by heavy additional expenditure in providing air raid shelters and other war-time expediencies. Undoubtedly, one outstanding effect of the war has been to arouse the nation to a fresh sense of the value of its child life. Few need reminding, at this time, that the children of the nation should be its first charge—since they are its greatest asset. Dr. Barnardo's Homes plead the claims of destitute childhood. For seventy-four years these Homes have sought out helpless children, rescued and trained them for useful occupations. Dr. Barnardo's Homes have under their care the largest family of the Empire's needy children to be found anywhere. They willingly act as father and mother to these children and they are striving, with God's help, so to nurture, educate, and train them, physically and morally, that in the days to come, when they are called upon to take their places in the world, they shall not be found wanting. But just now Christmas is close at hand and the Homes earnestly plead for help to chase away every cloud that might threaten to overshadow eager little lives. War-time Christmas gifts should be sent to 20, Barnardo House, Stepney Causeway, London, E.1., and cheques, etc., made payable to "Dr. Barnardo's Homes," and crossed "Barclays Bank Ltd."

WESTMINSTER HOSPITAL

Although the number of beds available for civil cases has been restricted, by the reservation of a number of wards for home war casualties, the new Westminster Hospital is fulfilling every expectation. Facilities for the treatment of patients in its new and beautiful wards, including a special section set apart for private patients and another for maternity cases, and the "no waiting" system for the handling of out-patient cases, are bringing to the hospital a continuous stream of men, women and children requiring urgent and serious attention. The cost of making the hospital as safe as possible under war conditions has alone run into many thousands of pounds; and all this must be added to the normal costs of maintaining an entirely modern and invaluable centre of healing, teaching and research. Many old friends of Westminster Hospital have rallied to its aid, but more help is most urgently needed. Put Westminster Hospital on your Chrismas gift list.

N.S.P.C.C.

Now that war has come, will the N.S.P.C.C. continue its work? We are assured that such a question has been asked. A similar one would be "Since the sea is so rough, will the lifeboats put out?" There can be no doubt about either answer. The Society will continue to function just as long as its services are necessary and its work continues to appeal to the head and heart of the generous public. This work affects the welfare of more than 100,000 British children every year. The Society for the Prevention of Cruelty to Children has never claimed that all its cases consist of children who have been brutally treated. The chief word in its title is "Prevention," and the prevention of neglect is the Society's major function. The Society will also maintain its activities in regard to securing help for weakly and crippled children and in this connection it has, in order to ensure that its aim shall be made quite clear, added to its title another one which reads "National Society for the Protection and Care of Children." Already it has undertaken a countless number of inquiries respecting evacuated children and the way it has dealt with this matter has evoked the admiration of local authorities everywhere. In the last war the Society was the recipient of the thanks of those in control of the armed forces for what it did for the children of the men who were serving. It will do similar work again.

DISTRESSED GENTLEFOLK

The Distressed Gentlefolks' Aid Association was formed for the relief of gentlepeople who, from various causes, are in deep distress, and in many cases on the verge of starvation. The Association makes weekly grants to a very large number of its necessitous cases, and also supplies clothing, blankets, invalid comforts, and makes special allowances to others who are in distress. Unfortunately, the number of appeals from poor souls in urgent need has increased, while the available funds are reduced on account of the war. Donations will be gratefully received at 74, Brook Green, W.6.

Christmas

THE SPIRIT OF CHRISTMAS will remain despite the War, and there will be celebrations, though not in every home.

THE CHURCH ARMY is planning to carry the Spirit of Christmas into the little homes of lonely old people and gentlewomen in distress and into the homes of the very poor as well.

It may not be possible to distribute Christmas Parcels on quite the same wholesale scale as before, but the Church Army is determined to do all it can.

Our Sailors, Soldiers and Airmen claim a large share of our attention to-day. There are Recreation Huts, Canteens and other Centres to be maintained and new ones to be erected and opened. The Christmas Spirit must not be lacking in our efforts for the brave men who are defending our land.

We cannot carry on any of this work without your help. Will you then, in the Spirit of Christmas, give something to help? Cheques, etc., should be crossed "Barclays, a/c Church Army," and made payable to Preb. Carlile, C.H., D.D., Church Army, 55 Bryanston Street, London, W. 1.

CHURCH ARMY

A Happier
CHRISTMAS
for 120,000 Children!

More than 120,000 children are happier each year because of the intervention of the N.S.P.C.C. Homes where ignorance, discord and even heartlessness prevail are being transformed by love and understanding counsel . . .

The war has brought the Society new work for the 1,000,000 evacuated children: disclosures of wrongful conditions call for prompt action if harm to the children is to be avoided. At the Season of the Feast of the Child please help those less fortunate children by your gifts to the

N.S.P.C.C.
NATIONAL SOCIETY for the PROTECTION & CARE of CHILDREN

National Society for the Prevention of Cruelty to Children

Address to Wm. J. Elliott, O.B.E. Director, Victory House, Leicester Square, London, W.C.2.

PLEASE HELP US TO FIGHT OUR EXPENSES

OUR income has decreased but evacuation, securing buildings in safe areas, A.R.P. at country Homes has been a very heavy expense, which we must overcome. The 1,165 poor children must not be forgotten.

PLEASE HELP US TO FIGHT OUR DEBTS, SO THAT WE MAY CARRY ON OUR "NATIONAL SERVICE."

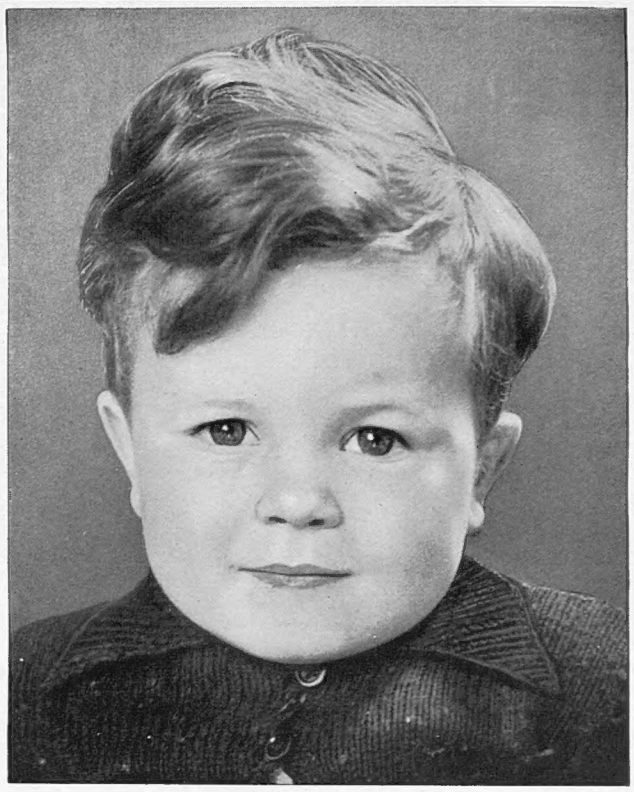
DONATIONS AND LEGACIES URGENTLY NEEDED

THE SHAFTESBURY HOMES & "ARETHUSA" TRAINING SHIP

(FOUNDED 1843)

164, SHAFTESBURY AVENUE, LONDON, W.C. 2

PRESIDENT: H.R.H. THE DUKE OF KENT, K.G.



Please don't let it be a

"BLACK-OUT CHRISTMAS"

for the 8,250 boys and girls in

DR. BARNARDO'S HOMES

War is adding greatly to our anxieties.

CHRISTMAS GIFTS

of **10/-** would be very acceptable.

Cheques, etc. (crossed), payable "Dr. Barnardo's Homes," should be sent to 20 Barnardo House, Stepney Causeway, London, E.1.

CHRISTMAS

An unexpected gift of blankets, invalid comforts, or a special nourishment grant, would bring such relief to many old and invalid Gentlepeople weighed down by the burdens of grief, illness and privation, whose winter assistance funds have been depleted by the War.

The

Distressed Gentlefolks' Aid Association

urgently appeals that this Christmas they will not be forgotten.

The Secretary, 74, Brook Green, London, W.6

The Treasured Gift

YOU can solve every Gift problem with Conway Stewart All-British Pens and Writing Sets. The moderate prices, from 5/- to 35/-, ensure economy; the charm and variety will suggest the appropriate present for every name on your list.

OF ALL STATIONERS AND STORES

Coloured Catalogue post free from the Manufacturers:

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Makers of good pens for 35 years
75/82 Shoe Lane, London, E.C.4

No. 286 12/6

The ALL-BRITISH **Conway Stewart**

BREAST SUPPORTER

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For small figures only, in white fine material, **19/6**
White material. For drooping, heavy figures, **38/6**
Loose Breasts, **32/6**
Pink Silk or Net Detachable straps from **52/6**
Very low back model, **63/-**
Please state Bust and Underbust measurements.

JOUJOU GIVES UPLIFT and SUPPORT to FIRM or LOOSE BREASTS

INGENIOUS DESIGN for AMPUTATION.

WITHOUT & WITH NURSE WITH COMFORT

The ONLY BREAST SUPPORTER for GIRLS to WEAR. It gives UPLIFT, PREVENTS STOOPING and BREASTS from DRAGGING and BECOMING SHAPELESS. ALSO GIVES IMMEDIATE RELIEF from PAIN when WORN DAY and NIGHT. DOCTORS ADVISE EVERY WOMAN to WEAR.

Various prices for one's requirements and taste.

FOR AMPUTATION. *Prices on application.*

Joujou Breast Supporter with Pad.

Personal fitting when calling or send your order. Free illustrated circular. If not satisfactory, money returned in U.K. Orders guaranteed immediately executed by return post. Write or 'Phone Welbeck 1249. *Post free only in U.K.* *Obtainable only from*— 9129 Dept. S.352

JOUJOU Co. 32 BAKER STREET LONDON, W.1.

THE SPHERE REGISTER OF HOTELS

ENGLAND

Aldeburgh.—Wentworth Hotel. Tel. 312 & 313.
Ashburton (S. Devon).—Holne Park Hotel.
Bath.—Lansdown Grove Hotel.
Bexhill-on-Sea.—Hotel Riposo. Tel. 472.
Blackpool.—The Headlands. A.A. and R.A.C.
Bognor Regis.—Royal Norfolk Hotel. Tel. 40.
Boscastle.—Welltown Manor Guest Hse. Tel. 17
Bournemouth.—Bourne Hall Hotel. Tel. 5.
Bournemouth.—Canford Cliffs Hotel.
Bournemouth.—Hinton Firs Hotel.
Bournemouth.—Priory Hotel.
Bournemouth.—Tollard Royal.
Brighton.—The Kings Hotel.
Burley (New Forest).—Burley Manor Hotel.
Bushey.—Bushey Hall Hotel.
Cambridge.—Blue Boar Hotel. Tel. 3030.
Chagford (Devon).—Easton Court.
Chipping Campden.—Cotswold Hse. Htl. Tel. 330
Crowborough (Sussex).—The Crest Hotel.
Droitwich.—Raven Hotel.
Dulverton.—Carnarvon Arms.
Dulverton (Som.).—Woodcote Hotel. Tel. 129.
Exeter.—Royal Clarence Hotel.
Exmouth.—Maer Bay Hotel.
Folkestone.—Queen's Hotel. Telephone 2219.
Goring-on-Thames.—The Bull. Tel. Goring 57.
Hailsham (Sussex).—Woodside Hotel.
Harlyn Bay.—Lower Pol Mark Hotel.
Hove.—Dudley Hotel. Completely modernised.
Leatherhead.—The Red House Hotel.
Looe.—Boscarn Hotel.
Lytham St. Annes.—Clifton Arms Hotel.
Lyme Regis.—Hotel Alexandra. Tel. 10.

ENGLAND—*continued*

Manchester.—Bowdon Hydro.
Mundesley-on-Sea (Norfolk).—Manor Hse. Htl.
Newquay.—Headland Hotel. Tel. Newquay 2211.
Ninfield (nr. Battle).—Moor Hall Hotel. Tel. 30
Ockham.—The Hautboy. Ripley 2L.
Oxford.—Mitre Hotel. Tel. 2335 and 3840.
Paignton.—Ravenswood. Cliff Road.
Penzance (Cornwall).—Queen's Hotel.
Plympton (nr. Plymouth).—Elfordleigh Hotel.
St. Leonard's-on-Sea.—Royal Victoria Hotel.
St. Margaret's Bay (Kent).—The Granville Htl.
Salisbury.—Old George Hotel. Tel. 3189.
Sanderstead (Surrey).—Selsdon Park Hotel.
Scarborough.—The Grand. 'Phone: 1053.
Shaftesbury (Dorset).—Coombe House Hotel.
Sidmouth.—Cedar Shade Hotel.
Sidmouth.—The Torbay Hotel
Sidmouth.—The Royal Glen Hotel. Phone 221
Tintern.—Beaufort Hotel.
Torquay.—Lincombe Hall. Tel. 2302.
Torquay.—Park Hall Hotel.
Torquay.—Roslin Hall Hotel. Tel. 4373 (2 lines)
Treyarnon Bay (Cornwall).—Waterbeach Hotel.
Tunbridge Wells.—The Spa Hotel.
Twyford (Berks.).—Grove Hall Hotel. Tel. 109.
Weymouth.—Royal Hotel. Tels. 627 & 628.
Worthing.—Greystoke Private Hotel. Tel. 991.
Washington (Sussex).—Clematis Cottage Hotel.

GREAT NORTH ROAD

(Figures in brackets show mileage from London)

Catterick (229).—Bridge House Hotel.
Sutton-on-Trent (133½).—Old England Hotel.

ENGLAND—*continued*

ENGLISH LAKES

Keswick.—Borrowdale Hotel. Borrowdale 24.
Keswick.—Royal Oak Hotel.

LONDON

Ambassadors Hotel, W.C.1. Tel. Euston 1456.
Bailey's Hotel, Gloucester Road, S.W.7.
Dorset Square Hotel. Off Baker St., N.W.1.
S. Kensington Htl., Queen's Gate Terrace, S.W.7
Stafford Hotel, St. James's Place, S.W.1
United Services Hotel, S.W.7. Tel. Wes. 7131.

SCOTLAND

Tomintoul (Banffshire).—Richmond Arms Htl.

WALES

Llandudno.—Imperial Hotel. Facing sea
Llangollen.—Hand Hotel. A.A. and R.A.C.
Tan-y-bwlch.—Oakeley Arms Hotel.

NORTHERN IRELAND

Belfast.—Grand Central Hotel.
Rosrrevor.—Great Northern Railway Hotel.

EIRE

Dun Laoghaire (Kingstown).—Ross's Hotel.
Glendalough (Co. Wicklow).—Royal Hotel.
Greenore.—Great Northern Railway Hotel.
Greystones (Co. Wicklow).—Grand Hotel.
Kingstown (Co. Dublin).—Royal Marine Hotel.

In Quest of Good Hotels

By ASHLEY COURTENAY

To be a Home from Home is the Highest Achievement at which an Hotel can Aim—Comfort in the West Country

THERE are many ways of gauging the measure of efficient service of our British hotels, but no more exacting test could be devised than the traveller's first reactions on his arrival after one of those all too frequent days of late when the rain has been pitiless in its output.

Of recent weeks the Clerk of the Weather has, with a malicious glint in his eye, been supplying me with wholesale opportunities of visiting hotels under such conditions. Would that I could pillory the bad ones by name. Glad am I that I can publicly mete out praise to those who so easily passed their test.

An Hotel, So-called—Somewhere in England.—I had seen it advertised and had consequently noted it down for inspection. How unfortunate for them I had selected such a wet day. I drove up the drive. Perhaps it was a good thing it had been raining hard, for the pot, I nearly wrote shell, holes were so pronounced. I walked in and around the entrance lounge and if the hour had not been so late would have walked out. There was no one to greet me, no fire to warm me. I found my way to the dining room entirely by scent. A fly on my table-cloth had wisely departed this life some hours or possibly days ago. The rest you can guess. Tepid soup. Insipid fish. Soggy vegetables. Packet cheese. 1s. 6d. would have been a high price to pay. The cost was 3s. 6d. Even the rain was companionable after that. Let us turn to a more pleasurable stay.

The Redcliffe Hotel, Paignton.—When one directs one's car westwards one looks forward to some stay and the sunlight dancing on placid waters, but last week even my mental picture of the West country was blotted out by rain. One hundred and ninety-six miles I drove through wet and a wind which made even steering a car a grim business at times, and at what should have been sunset, I pulled up at an hotel whose entrance and front porch looks sombre at the best of times.

But I had visited the Redcliffe once before and had anticipated for some hours the brightness I should find within.

There was no disillusionment as I walked in. "Welcome home" were the first words which greeted me. There was a welcome look in the eyes of the staff as I re-met them one by one. Warm fires full of dancing flames burnt merrily away in the lounges. Afternoon tea with most tempting cakes appeared in the twinkling of an eye. My bedroom was beautifully warm (actually I turned off the central heating for awhile). The bath water was piping hot and, in short, I felt at home.

I have a very high regard for this homely hotel, perched as it is in probably the very centre of the curve of Torbay. In this unique position where the sunshine does so often predominate over the rain one is literally by the water's edge. Here I could always feel at home no matter the month or the weather.

The *Oxford Dictionary's* definition of an hotel is "A house for entertainment of strangers and travellers." And a standard that many an hotel could adopt is the Redcliffe Hotel at Paignton.

Now another and perhaps a final word as regards this coming Christmas of 1939. If you are still thinking of going away do not delay your arrangements any longer. I feel convinced there will be a last-minute rush. Hotels this year of all years must plan ahead. Help them by booking your accommodation now, though, if you are still in doubt as to where to go, do not hesitate to write to me.

ANSWERS TO CORRESPONDENTS

M. H., Leicester.—Replying to your inquiry concerning a Christmas riding holiday I would suggest the Haycock Hotel, Wansford-in-England, where there should be no difficulty in getting all the riding you want. As you would prefer an old country hotel, this would, I think, be ideal.

R. W. F., Lancs.—There are several places I can recommend which should be bright and cheery. For instance, the Rosley Manor at Andoversford, about 7 miles on the Oxford side of Cheltenham. It is really a country club and is extraordinarily well run and very cheery. Another spot which is equally bright is Shuthonger Manor, again a country club, outside Tewkesbury on the Worcester road. They are also running Christmas programmes at the Trust House—the Peverel of the Peak, at Dovedale in Derbyshire.

R. A. F., Newport.—Replying to your inquiry I have two most suitable places for you. The Beaufort Hotel at Tintern. There is no romance in their advertisement in which they say "To stay with us is to remain, for here good fires, good cooking and good service make the perfect alliance." Should you want to go a little farther afield and prefer a country-house type of hotel, then the Mount Craig, near Ross-on-Wye, would be ideal. Here is an hotel where pleasant memories will long remain with you.

G. H. M. in Selkirkshire.—There is nothing I can recommend from personal knowledge in Caterham itself, but in the near neighbourhood are the following hotels which I think would suit you:—Monks Court Hotel, Reigate, Surrey; Kingswood Warren Hotel, Kingswood, Surrey; Hoskins Arms Hotel, Oxted, Surrey.

Mr. Ashley Courtenay is always pleased to advise "Sphere" readers of hotels, both large and small, known to him personally. Letters should be addressed to him, c/o the Editor, THE SPHERE, *32-34, St. Bride Street, London, E.C.4. Personal and telephone inquiries, however, cannot be accepted.*

Pain after Meals

Do you find you cannot eat a thing without pain and discomfort afterwards? That is because acid turns your food tough and you cannot digest it. 'Milk of Magnesia' Tablets relieve the acidity at once and your stomach starts digesting your food right away and finishes its work with perfect ease.

Your indigestion has vanished and need never return. Get a box of Tablets now and prove this at your next meal.

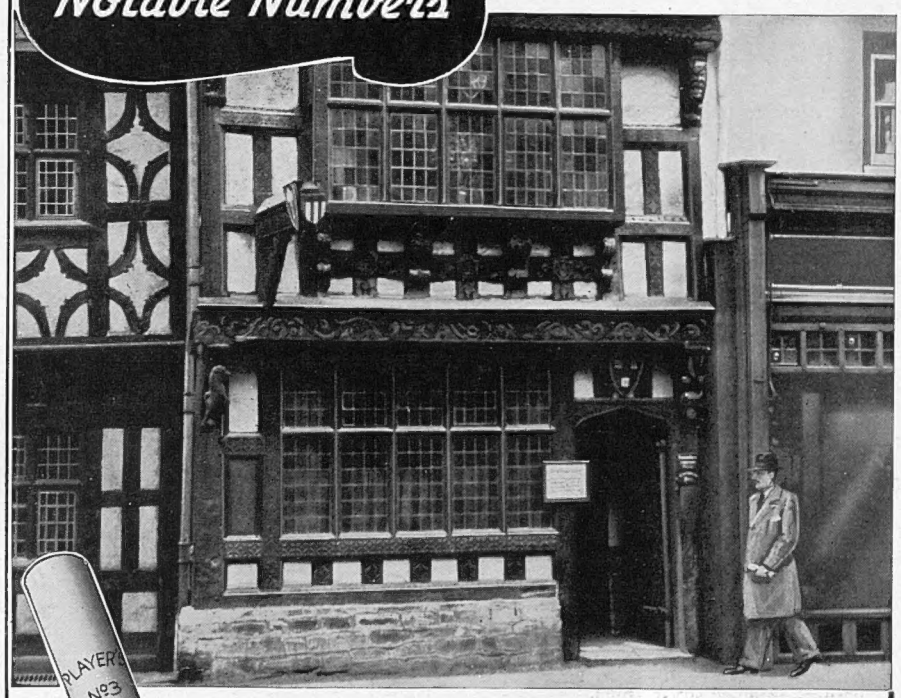
Neat flat boxes for the pocket, 6d. and 1/-. Also family sizes, 2/- and 3/6. Obtainable everywhere.

'MILK OF MAGNESIA' REGD. BRAND TABLETS

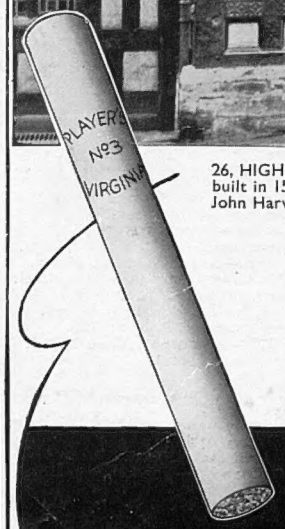
SLIP A 6D. BOX IN YOUR POCKET OR BAG

'Milk of Magnesia' is the trade mark of Phillips' preparation of Magnesia.

Notable Numbers



26, HIGH STREET, STRATFORD-UPON-AVON. This beautiful Elizabethan house, built in 1596, was the maiden home of Katharine Rogers who became the mother of John Harvard, founder of the American University.



Another famous number founded on traditional merit is Player's No. 3—that well-known cigarette of delightful mellowness and excellent flavour, with the EXTRA quality that critical smokers demand.

Cork-Tipped or Plain . . .

PLAYER'S NUMBER 3

EXTRA QUALITY VIRGINIA

20 for 1/6 · 50 for 3/8 · 50 TIN (plain only) 3/9

3P65.E

ATTACK THAT COLD WITH VAPEX

Colds neglected open way to worse ills. Clear your cold quickly—safely with Vapex . . . a drop on your handkerchief. The pleasant-powerful antiseptic vapour, deep-breathed, searches out germs in warm breeding places in nose and throat, brings immediate relief. Your head clears, stuffiness and congestion break up. Regular Vapex-breathing continues good work of germ destruction . . . cold soon vanishes.

From your Chemist, 2/- & 3/-

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ELSEWHERE ABROAD	3 5 6	1 14 8	15 10

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THE SPHERE, 32, St. Bride St., London, E.C.4

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Here is a Christmas headquarters in delightful country with open fires in the lounge and central heating in every single room. London within easy reach: golf and plenty of amusements near by. Tempting menus, tempting inclusive terms.

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Lift, American lounge, all-weather tennis court.

Write for Christmas programme to Mr. EGLINGTON ADAMS. *Telephone: Crowborough 394*

AND *NOW*, Mr. Business-Man!

If you must stay within reach of Town during the war, why not make your base at

THE RED HOUSE, LEATHERHEAD

Frequent electric trains reach London in half an hour. A most comfortable, quiet hotel, a lovely garden, excellent tennis courts. Telephone: 2271

The Stafford Hotel ST. JAMES'S PLACE, S.W. 1

A Restful Oasis in the Heart of St. James's

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Telegrams: Stafford Hotel, London

L. GANDOLFO, Managing Director

We occupy a restful setting with the green hills of South Devon as our vista, whilst two acres of grounds surround and supply us. The sea, too, is but five minutes away. The welcome of a well-built Georgian house, wide windowed and sunny—furnished with taste—and run by those who understand what good cooking and good beds really mean.

CEDAR SHADE COUNTRY HOUSE HOTEL

SIDMOUTH

THE ROYAL GLEN HOTEL SIDMOUTH *'Phone 221*

The Hotel with a Country House atmosphere, situated in picturesque grounds adjoining the esplanade.

DIET A SPECIALITY.

Terms Moderate and Inclusive. Resident Proprietors: Mr. and Mrs. W. Martin.

AND HERE IS PEACE . . . in a sheltered park of 60 acres, a sun-trap 400 feet up, an hospitable hotel for residence during the dark days of winter and war. London under an hour by train. Sporting golf course in the grounds.

THE SPA HOTEL ROYAL TUNBRIDGE WELLS

First-class in comfort, cooking and service. 85 rooms and suites.

Write to S. Hancock, Director, for tariff-booklet entitled "And here is peace."
Telephone: Tunbridge Wells 1911

PARK HALL TORQUAY

FACING DUE SOUTH
COVERED VERANDAH
SUPERB SEA VIEWS
VITA-GLASS SUN LOUNGE
3 ACRES GROUNDS

Within sight and sound of the sea. Moderate terms include FREE GOLF (18 holes). Tennis, Squash, Badminton, Bridge. Refurnished and redecorated throughout.

Write now for Christmas Programme "P."
'Phone Torquay 3434

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SANDERSTEAD - - - SURREY

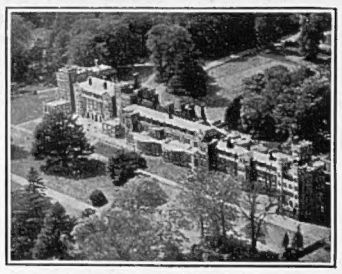
'Phone: Sanderstead 2001

Unique for War time residence or rest

Over 500 ft. up on the Surrey Hills, yet only half an hour from the heart of London.

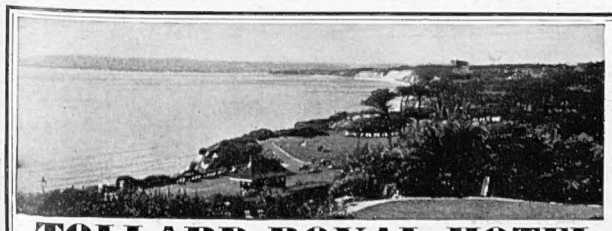
FREE GOLF ON PRIVATE 18-HOLE COURSE (6,430 yards)

Illustrated brochure free on request.



Full en pension with free service to station, magnificent solarium, billiards, tennis, dancing, squash rackets, electric gymnasium, all free. Riding. REMOTE FROM OTHER BUILDINGS, IN OWN PARK OF 230 ACRES, IN A NEUTRAL AREA. Adequate subterranean gas-proof air raid shelter, protected by four reinforced concrete floors. Hot and cold water, telephone and radiator in every room. Over 150 rooms, the majority with private bathroom. Moderate inclusive terms.

On outbreak of hostilities we reduced terms 20% to 25%. No increase has been made in these terms and there is no avoidable alteration in standard.



And this can be your bedroom view at

TOLLARD ROYAL HOTEL BOURNEMOUTH

Terms and details from Miss P. E. WOOLCOCK

The Perfect Hotel for Winter and War-time Residence.

BOURNE HALL HOTEL

BOURNEMOUTH

100 modernly equipped rooms. Bridge. Billiards.

SPECIALLY FITTED AIR RAID SHELTERS. **Write for Christmas Programme.**

PEACE IN THE FOREST

Forest ponies as placid as ever. Cattle browsing in our acres of meadowland. The sunlight playing daily on our lake. Fruit and garden produce awaiting your daily consumption. Come now.

BURLEY MANOR HOTEL

AT BURLEY HEART OF THE NEW FOREST

A beautifully equipped first-class hotel run on first-class lines by the new Resident Proprietors, Mr. and Mrs. H. Dakin Markham. *'Phone Burley 70*

HOLNE PARK HOTEL, ASHBURTON, S. DEVON

Come and fish, feast, and forget, at this first-class Country House Hotel, situated on perhaps the most beautiful stretch of the River Dart. Here indeed Nature dominates over thoughts of war. Let us send you our Brochure.

Winter Terms from **3½ Gns.**

PRIORY HOTEL, EXETER ROAD, BOURNEMOUTH

In sunny, sheltered position, **midway between Square and Pier,** offers quiet dignified comfort to Winter Visitors. Three lounges with coal fires and radiators. Cheery dining-room. Good food and service. Spotless cleanliness. All bedrooms hot and cold water, gas fires, steam radiators and excellent beds.

Terms from **4 gns.** *'Phone 1851 'Grams Sunny*

CLEMATIS COTTAGE HOTEL, WASHINGTON, nr. WORTHING

A haven of content and character for a week-end or longer in the fold of the Sussex downs. Noted in particular for its cooking, and its home-made cakes, as well as for the discerning people who repeatedly stay there. Easy access to the sea, as well as the West Sussex Golf Club at Pulborough.

Inclusive Winter Terms from **3 Gns.**

MAER BAY HOTEL, EXMOUTH, SOUTH DEVON

For Winter or permanent residence, it would be difficult to discover a more perfect situation than the sunny estuary of the Exe. The Hotel is famous for its comfort and cuisine and occupies a sheltered position facing south, overlooking the sea and glorious coast of Devon. Golf, Tennis, Riding, Fishing are available. Fully licensed. Recommended A.A. & R.A.C.

Inclusive Terms from **4 gns.** per week.

WOODSIDE HOTEL, HAILSHAM, SUSSEX

Safety without Solitude! For we are only 6 miles from Eastbourne, and lie in 6½ acres of grounds off the London—Eastbourne road. We have all modern conveniences such as central heating and H. and C.: and as we are a Country Club as well, there is always congenial company.

Terms from **3½ gns.**

LOWER POL MARK, HARLYN BAY, CORNWALL

A little bit of Heaven, away from the strife and sordid side of war. Golden Sands. Glorious Air. A modern attractive home, distinguished for its comfort and cooking.

From **3½ gns.**

BOSCARN HOTEL, LOOE, SOUTH CORNWALL

Safety, Sands and Sunshine. Here is a perfect place for your family, far from the madding War. Here they can enjoy contentment of mind, beauty of environment and Cornish produce fresh from local farms. A first-class hotel on the water's edge. Special terms for children.

From **4 gns.** per week.

MANOR HOUSE HOTEL, MUNDESLEY-ON-SEA, NORFOLK

Each year, many who appreciate good food, good wines and good service, winter with us. They are also appreciative of the joys of central heating and good fires, should the weather turn cold. Yet, on the whole, we enjoy a wonderful climate, and there are few days when one cannot be out on the 18-hole golf course.

Weekly Terms from **3½ gns.** Month or longer

MOOR HALL HOTEL, NINFIELD, Nr. BATTLE, SUSSEX

A safe and sunny spot, self-contained (11 acres) and self-supporting—even to growing our own bacon. Horses to ride, tennis courts to play on, rabbits to shoot. Such is an indication of life at "the hotel with a country house atmosphere." Resident Props.: Mr. & Mrs. Eric Johnson. Tel. Ninfield 30.

Terms from **3 gns.**

QUEEN'S HOTEL, PENZANCE, CORNWALL

Winter Wisely! Here, on the sea front, facing South and overlooking Mount's Bay and St. Michael's Mount, is an hotel which for years has been to many a winter home. 100 bedrooms. Modern bathrooms. Lift. Our telegraphic address is "Seaward," and our watchword "Comfort."

Terms from **3 gns.**

THE GRANVILLE HOTEL, ST. MARGARET'S BAY, KENT

A Winter Sun-trap, sheltered from the North, in a peaceful reception area, and surrounded by good golf courses, this modernly equipped and long established hotel has always appealed to those people of good taste who seek relaxation from the travails of every-day life.

Terms from **4 Gns.**

COOMBE HOUSE HOTEL, NR. SHAFTESBURY, DORSET

Away from the atmosphere of war. Situation healthy and beautiful. Every comfort. Trains met Semley Station by appointment.

Tel.: Shaftesbury 130

Terms from **4 gns.** for extended stay.

ROYAL VICTORIA HOTEL, ST. LEONARD'S-ON-SEA, SUSSEX

An hotel of dignity and solidity, built to withstand the onslaughts of weather . . . and even war. A favourite hotel to winter in. A sun-trap, and a sanctuary for all who appreciate that blessed feeling of . . . peace.

Terms from **5 gns.** inc.

BEAUFORT HOTEL, TINTERN, WYE VALLEY

The famous Abbey faces us. The loveliness of the Wye Valley surrounds us. To stay with us is to remain, for here good fires, good cooking and good service make the perfect alliance.

Terms **5 gns.** inclusive

EASTON COURT, CHAGFORD, DEVON

We are still going strong. Neither petrol restrictions nor black-outs preclude those who are appreciative of that blessed word "tranquility" from seeking us out. Here at the foot of Dartmoor we live and rejoice in the pursuits of the country, or in just eating, sleeping, reading, and talking.

Winter Terms from **3½ gns.**

THE RAVEN HOTEL, DROITWICH

If you are seeking Spa treatment or a comfortable winter residence you will like the homely comfort and the genuine English catering of this attractive black and white timbered four-star hotel. 100 Rooms, Lift, Central Heating, Night Porter. The hotel is fully described with photographs in our Brochure "Life Worth While." May we send you a copy?

Terms from **4½ gns.** a week

Wish all your friends A Happy Xmas with Craven A

This is the DESK TIN
100 for 5/10

This is the FLAT POCKET TIN
50 for 2/11

25 for 1/5½ • 40 for 2/4
50 for 2/11 • 100 for 5/10
150 for 8/9 • 200 for 11/8

MORE and more people are smoking Craven 'A' because these famous Cork-Tipped cigarettes are fresher, cooler—*smoother to the throat.* You can be certain you are choosing a gift which will be thoroughly appreciated if you send all your friends Craven 'A' this Christmas.

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